

VOL. 87

NO. 2

# textile

FEBRUARY • 1961

# bulletin

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To Cotton?  
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TEXTILE BULLETIN is published monthly by Clark Publishing Co., 218 West Morehead St., Charlotte 6, N.C. Subscription \$1.50 per year in advance, \$2 for two years. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N.C., under Act of Congress, March 2, 1897.

BPA

NBP

## NON-FLUID OIL

TRADE MARK

REGISTERED

Ordinary Oils and Greases  
Get on Warps and Fabric

Non-Fluid Oil  
Stays in Bearings

There is good reason why seven out of ten of the nation's textile mills prefer NON-FLUID OIL as their loom lubricant . . . It is cleaner and more economical than ordinary oils or greases.

NON-FLUID OIL stays in bearings lubricating dependably until entirely consumed. Unlike ordinary oils or greases it does not drip or spatter on warps, fabric and the floor. With NON-FLUID OIL you achieve highest output of perfect cloth and maximum efficiency. And, because NON-FLUID OIL outlasts ordinary lubricants by three to five times, you save on both lubricant and application cost.

Don't take our word for this . . . try it yourself. Send for a free testing sample of NON-FLUID OIL and Bulletin T-20.

## NEW YORK & NEW JERSEY LUBRICANT CO.

292 Madison Avenue, New York 17, N. Y.

Sou. Dist. Mgr.: Fred W. Phillips, Greenville, S. C.

### WAREHOUSES:

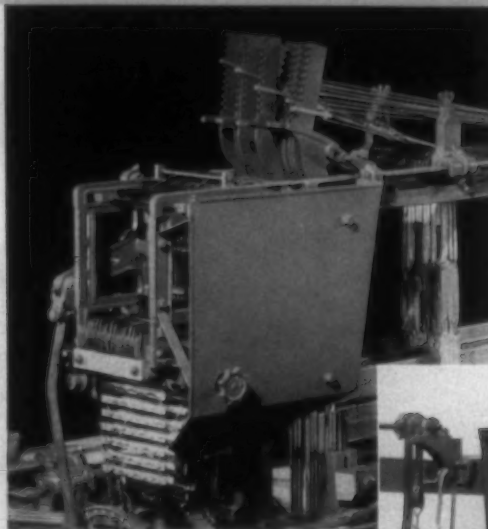
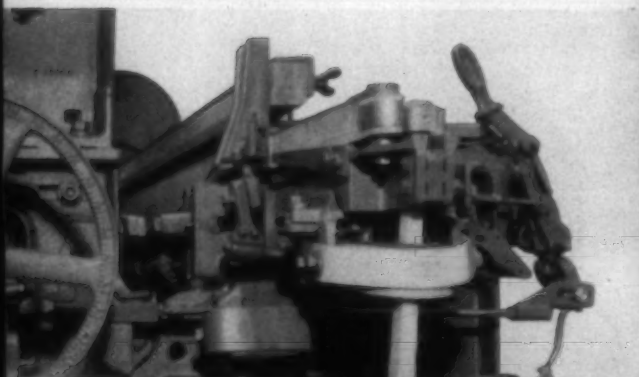
Atlanta, Ga. • Birmingham, Ala. • Charlotte, N. C. • Columbus, Ga. • Greensboro, N. C.  
Greenville, S. C. • Providence, R. I. • Springfield, Mass. • Chicago, Ill. • Detroit, Mich.  
St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

# X-3

## a new dimension in weaving

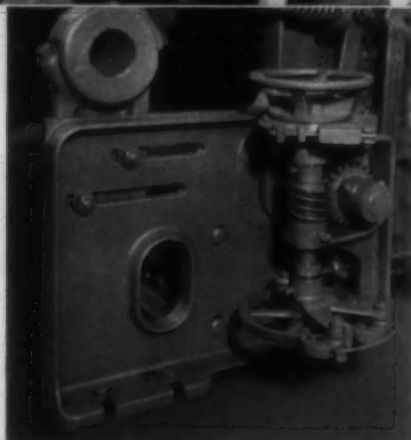
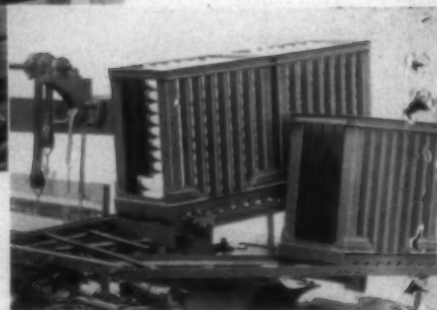
ALUMINUM OR WOODEN LAY CONSTRUCTION



### TOP MOTION

New strengthened Dobby  
— 16 harnesses, 15/32 Gauge or 7/8  
— 20 harnesses, 3/8 Gauge  
Clock Spring up to 6 harnesses

AUTOMATIC FILLING MAGAZINE



LET - OFFS  
Bartlett  
Tru-Tension  
Hunt

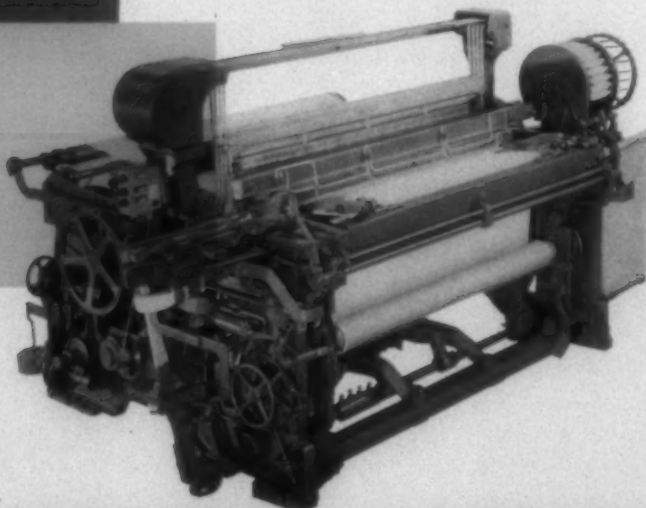
The X-3 Model Loom is designed to weave all of the fabrics normally woven on the X-2 and most synthetic fabrics commonly woven on the XD. This loom provides *greater versatility, increased speed, higher quality goods, and lower weave room costs.*

A weight increase of over 500 pounds in frame and shafting\*, contributes to added stability, reduces vibration, and permits higher speeds regardless of fabric being woven.

\*As compared with a Draper X-2 Model Loom

### IMPROVED TAKE-UPS

to weave a complete range of  
Cotton and Synthetic fabrics.



## DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N. C. • SPARTANBURG, S. C.



**SONOCO PRODUCTS COMPANY**  
CASE HISTORY NO. **638**



## PROBLEM: Discoloration of Yarn

The problem was caused by lacquer bleeding on the yarn. It was assumed that this was due to the effect of the coning oil on the lacquer tip of the cone. Investigation by the customer revealed that only certain cone tips were so affected. From this he concluded that Sonoco's lacquer tips varied in quality and composition. Samples of the customer's coning oil along with samples of the discolored yarn were submitted for testing.

In Sonoco's laboratories it was determined that the sample of coning oil had no effect on the lacquer. Oil was then extracted from the damaged yarn and tests showed that this oil did attack the lacquer almost immediately. This indicated a distinct difference between the coning oil and the oil extracted from the yarn. This was confirmed by the use of special analytical equipment.

Further investigation revealed that oils extracted from yarns supplied by certain manufacturers would cause lacquer softening. It was also learned that oil from yarn supplied by other manufacturers would not affect the lacquer. The study proved the problem was created, not by the customer's coning oil nor Sonoco's lacquer, but rather by the spin finish on the particular raw yarn.

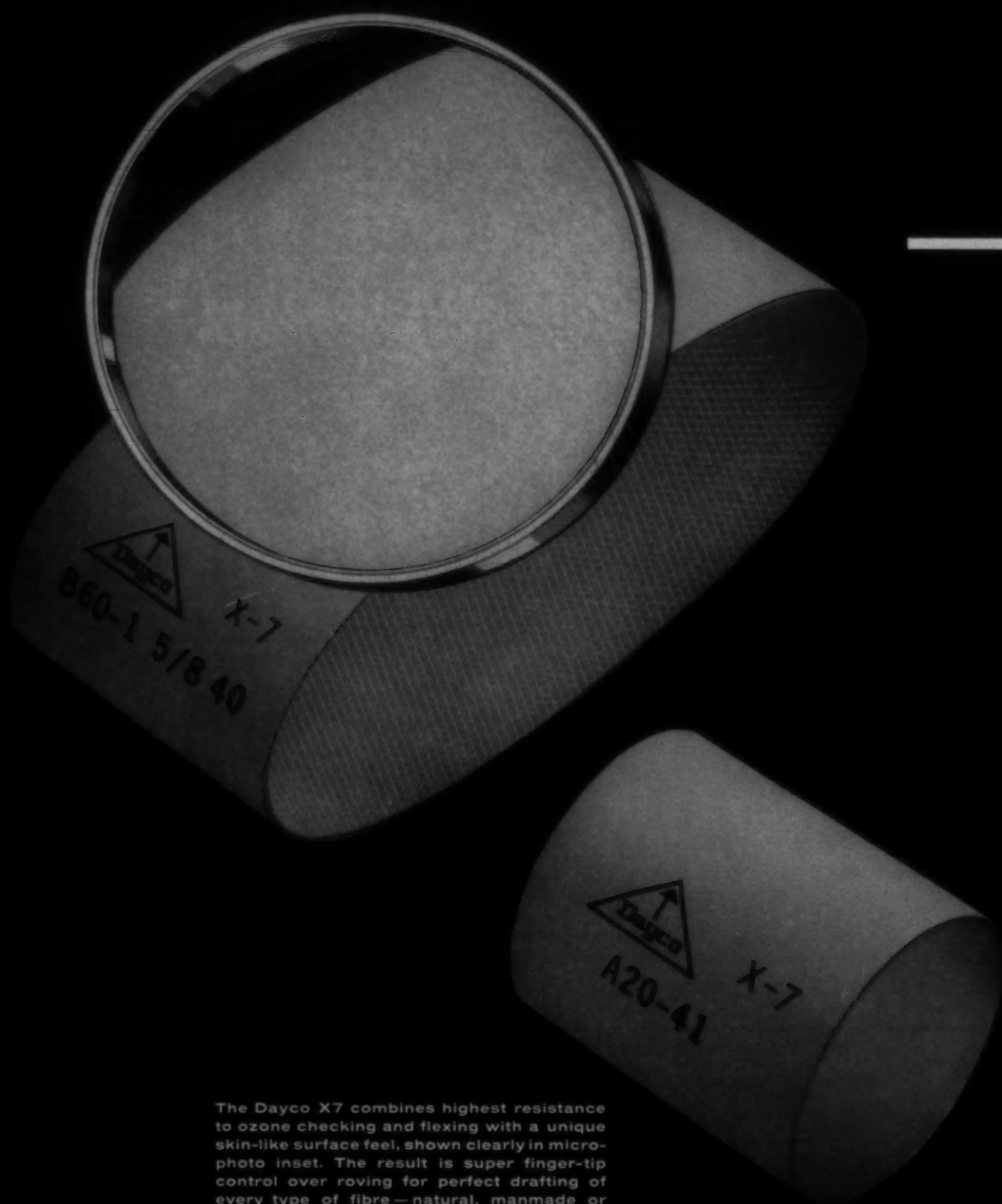
When you buy from Sonoco, technical service of this type is an added benefit. Only Sonoco in its field provides the continuous research, product development, and integrated manufacturing needed to meet the ever-changing requirements of the textile industry.

# SONOCO

Products for Textiles



**SONOCO PRODUCTS COMPANY, HARTSVILLE, SOUTH CAROLINA** • Mystic, Conn. • Akron, Ind. • Lowell, Mass. • Holyoke, Mass. • Phillipsburg, N. J. • Longview, Texas • Philadelphia, Pa. • La Puente, Calif. • Fremont, Calif. • Atlanta, Ga. • Richmond, Va. • Brantford, Ontario • Granby, Quebec • Mexico City



The Dayco X7 combines highest resistance to ozone checking and flexing with a unique skin-like surface feel, shown clearly in micro-photo inset. The result is super finger-tip control over roving for perfect drafting of every type of fibre—natural, manmade or blend. Available in all sizes for both short and long apron systems.

# The Amazing New Dayco X7 Apron Solves Many Major Drafting Problems

*Exclusive, new ingredients add longer life, improve drafting, cut downtime to new lows.*

Here's news of a major break-through in apron performance... the Dayco X7, with a special new ingredient that greatly increases the durability and the drafting effectiveness of its outer surface.

The Dayco X7 is readily identified by the Dayco triangle and arrow, as well as by the superior performance it gives on every type of drafting frame. Outstanding among its features is the skin-like texture of its outer surface. This improved surface texture made possible by Dayco's exclusive ingredient and processing gives finger-tip control. The result is smoother, easier drafting of all types of fibres and blends.

How well does the Dayco X7 meet other apron requirements?

1. Dayco X7 offers highest resistance to ozone checking.
2. Dayco X7 reduces longitudinal cracking caused by flex (hysterectic loss in molecular strength) to a minimum.
3. Dayco X7 turns without slipping, the bottom apron properly driving the top one without excessive friction.
4. The Dayco X7 inside surface provides the lowest possible coefficient of friction and maximum resistance to abrasive wear.

5. Dayco X7 meets the demand of modern drafting... heavier weighting, higher speeds, and higher drafts—so common to newer frames.

The Dayco X7 gives top performance in every one of these respects, and in many others. It drafts all natural and man-made fibres and blends more smoothly and efficiently.

Five years of developmental work by Dayco engineers have made the Dayco X7 a truly superior apron. And more than a year's testing "on the firing line" has confirmed their reports. In tests involving many spindle hours of actual use under every conceivable operating condition, the Dayco X7 has come through with flying colors.

The Dayco X7 is made in all sizes for both short and long apron systems. It is backed by Dayco's high standards of quality and service. It reflects the same careful design and precision manufacture as Dayco standard aprons and other Dayco textile products with which you're already familiar.

Discover the excellence of this outstanding new apron for yourself. Let your Dayco representative help you arrange a trial of the Dayco X7 in your own operation.

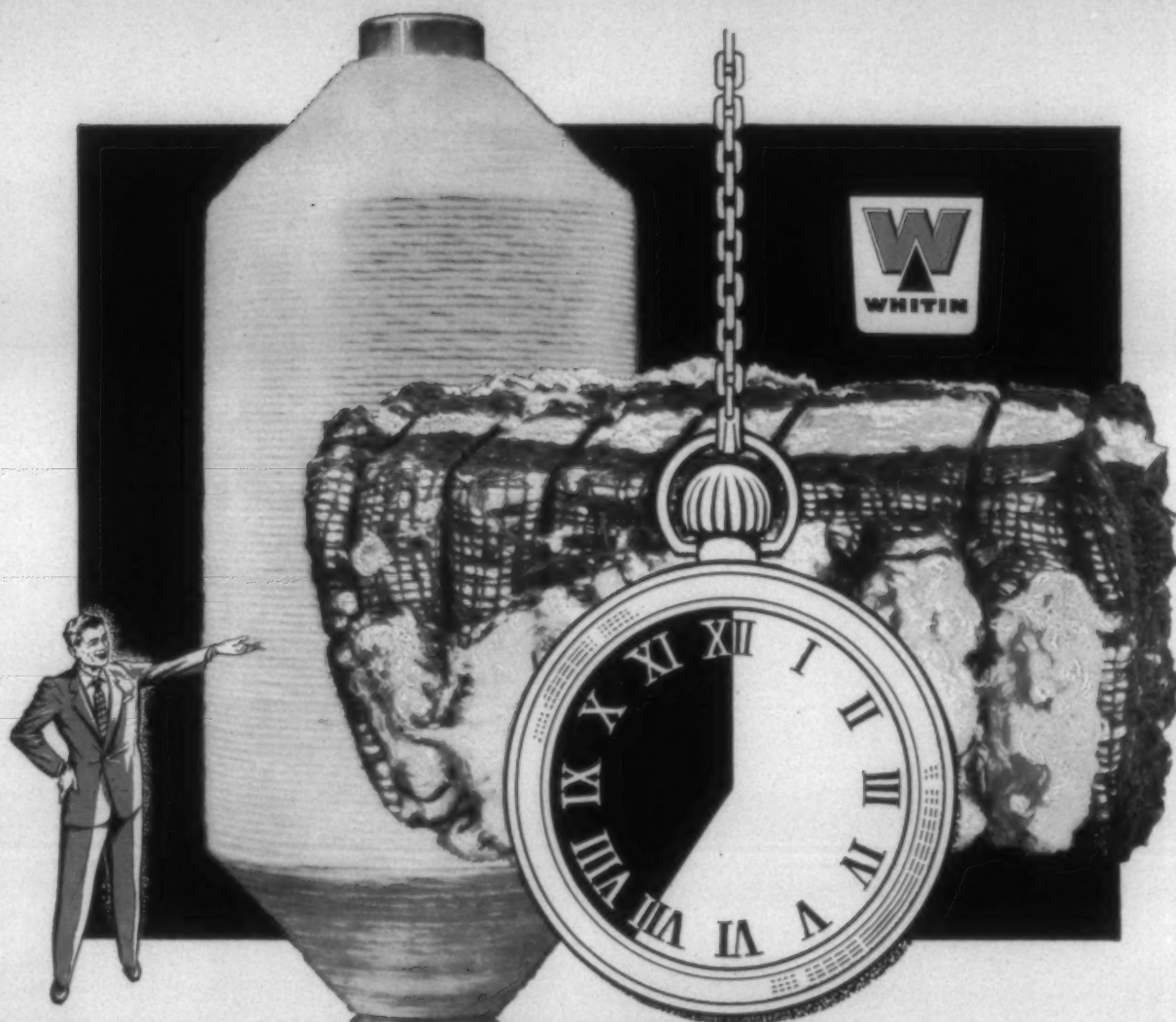
Phone or write Dayco Textile Products Co., 401 South Carolina National Bank Bldg., Greenville, S. C. Overseas plant: The Dayton Rubber Co. Ltd., Dundee, Scotland.

**Dayco**  
TEXTILE PRODUCTS CO.



Divison of Dayco Corporation





Process  
over a **BALE** at a time  
...in  $\frac{3}{5}$ ths of the time

Don't wait! For complete  
information call your  
Whitin Representative or  
write direct to us for  
descriptive brochure

with the new WHITIN  
**MODEL P**  
Roving Frame

**WHITIN**  
Machine Works

W H I T I N S V I L L E , M A S S A C H U S E T T S

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

Get peak cleaning  
efficiency on frames,  
underframes, overhead  
and alley areas with

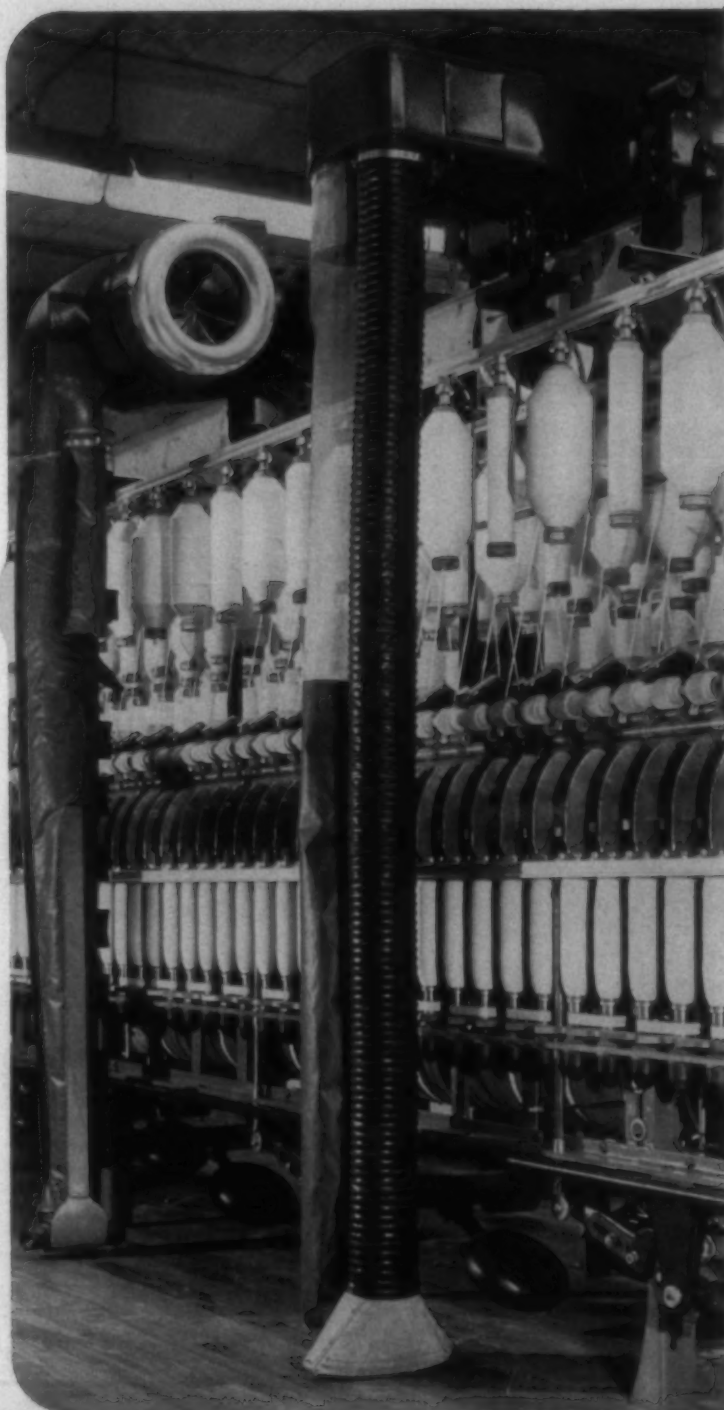
# COMPLETE COVERAGE FEATURES

of CROSS-JET  
FRAME CLEANER

and VACU-PAK  
FLOOR SWEEPER  
with automatic  
"Stop and Go"  
protection

Sweeper automatically stops on contact—then automatically re-starts when free of obstruction.

1. Provides protection to frame and spindles from trunk swinging free of obstacles and back into frame.
2. Provides protection for operator to work efficiently without interruption by traveling trunk.
3. Provides protection against damage to trunk by obstacles in its path.
4. Provides protection against accidents and operating time loss.



*Bahnson*

AIR-O-MATION

THE BAHNSON COMPANY • WINSTON-SALEM, N. C.

Dress: Joseph Love  
Sheer Fabric: Republic  
Yarn: ENKA nylon, for  
stay-pul crispness,  
stay-true colors



Stretch Stockings: Leath,  
McCarthy & Maynard  
Yarn: ENKA nylon,  
for sheer and shapely hosiery



Girdle: Formfit  
Yarn: ENKA Blanc de  
Blancs™ nylon, for  
whiter white foundations



Petticoats: Saramae  
Tricot Fabric: Bangor  
Yarn: ENKA nylon,  
for lovelier lingerie



Hose: Esquire Socks®  
Yarn: ENKA nylon, for  
a smarter look, softer touch

Why so many good things begin with

## ENKA NYLON Yarns

THE ANSWER is obvious—ENKA nylon is made to be versatile! How? First, Enka nylon has greater absorbency, makes nylon fashions comfortable to wear through sun-drenched summers, steam-heated winters.

Next, this amazing absorbency bequeaths our yarn a superior affinity to dyes. You'll find it responds beautifully to colors, keeps them sparkling and new through countless washings. White?

Enka Blanc de Blancs™ nylon, created especially for the foundation market, has made possible the whitest of white nylon girdles with dazzling counter appeal.

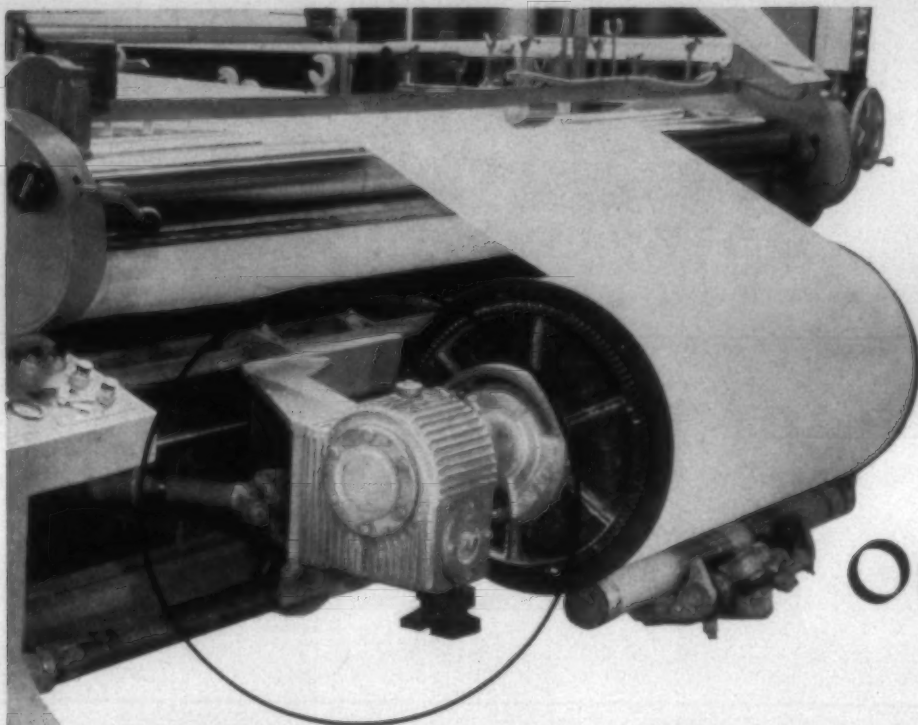
Best of all, Enka nylon has natural resilience, makes it easy to knit and texturize or weave into a bevy of handsome fabrics. Enka nylon has wonderful shape-retaining qualities, too, so fashions created with it always fit

smoothly, never sag.

These are just a few of the reasons why so many good things begin with Enka nylon yarns. If you haven't tried versatile Enka nylon yet—get on the bandwagon and try it NOW! Call Enka Merchandising in New York, 350 Fifth Avenue, PE 6-2300 or the District Sales Office nearest you.

 American ENKA Corporation, Enka, N. C. • Producer of nylon • rayon • yarns • fibers  
NEW YORK OFFICE: 350 Fifth Ave., New York 1, N. Y. • DISTRICT SALES OFFICES: Greensboro • Providence





# Don't Be Chained to Outmoded Drives

In this slasher drive a few simple and rugged parts replace the complicated maze of belts, chains, sprockets, etc. presently used in other slasher head drives. It has no sliding sprockets or gears. This eliminates the constant adjustments and the replacement of expensive parts which were formerly accepted as necessary. The result is long, trouble-free, and extremely quiet operation with greatly reduced downtime and consequent higher production.

The telescoping feature of this Torque Tube Drive permits the running of greatly varying width beams without projecting spindles. In addition, only Cocker's new HD Cylinder Section construction permits removal of bottom cylinders without removing top cylinder.

X These parts are eliminated

The Cocker Torque Tube Drive is standard equipment on all Cocker Slashers, whose other features remain as before — rugged construction, complete and accurate push button controls, full instrumentation, new fast and simple beam doffing, and Cocker's patented Type B Beam Drive which provides constant adjustable tension regardless of speed or load. Speeds up to 184 ypm and 20% to 25% more yarn per loom beam with production rates of over 1,650 lbs. per hour.

Write for full information today.

\*Pat. Applied For

## COCKER MACHINE & FOUNDRY COMPANY

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Montreal, Canada  
Oxford 7-2242

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I. La Catolica 45-911  
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### PLANT & OFFICES at Ranlo, N. C.

MAILING ADDRESS:  
Gastonia, N. C.

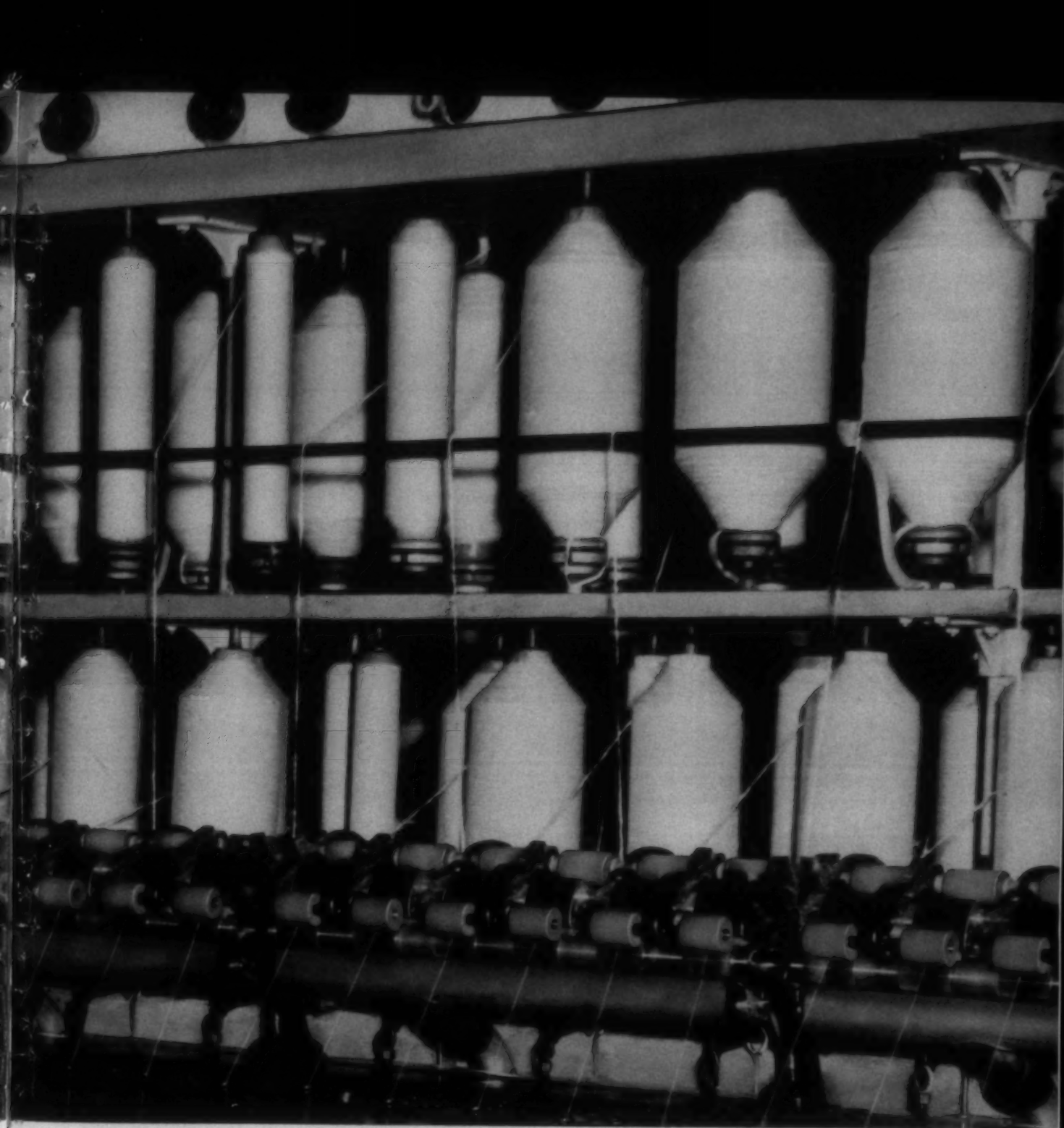
WORLD'S LARGEST DESIGNERS  
AND BUILDERS OF COMPLETE  
WARP PREPARATORY EQUIPMENT



Mr. Martin O'Neil, Overseer of Spinning at Chicopee Manufacturing Corporation, Manchester, N. H., checks yarn quality with Armstrong representative D. T. Starkey.

## ***Get maximum production of high-quality yarn***

If front roll lap-ups, eyebrowing, or yarn irregularities are slowing down production for you, a switch to Armstrong Accotex Cots may help bring your production up to maximum level. • The special rubber compounds that go into Accotex Cots are engineered to overcome these common spinning problems. For example, new anti-static compounds eliminate the major cause of front-roll lapping and have solved the problem for many mills. • Another anti-static material, Accotex NC-762, has effectively reduced eyebrowing in mills that use flat clearers—and provided a substantial reduction in total waste as well. • Armstrong has



## **...for years...with Armstrong Accotex Cots**

also developed new compounds which give excellent service on drafting systems where a softer cot reduces yarn irregularities and improves break strength. • Your Armstrong man will be glad to discuss your spinning problems with you and recommend an Accotex Cot that fits your needs. Call him or write for more information to Armstrong Cork Company, Industrial Division, 6502 Davis Avenue, Lancaster, Pennsylvania.

**Armstrong ACCOTEX COTS**



# Now...keep your work areas clean automatically, with specially designed Amco Cleaners!

Amco has developed a wide selection of automatic cleaning equipment . . . designed to cut down manual cleaning, improve quality, and step up mill production.

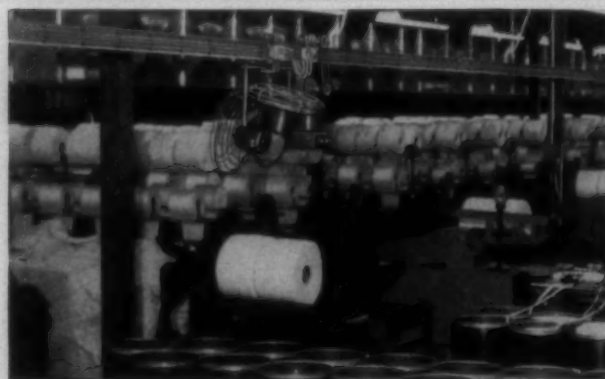
For money-saving facts about Amco Cleaners, call American Moistening Company — an organization with more than 70 years' experience serving the textile field.



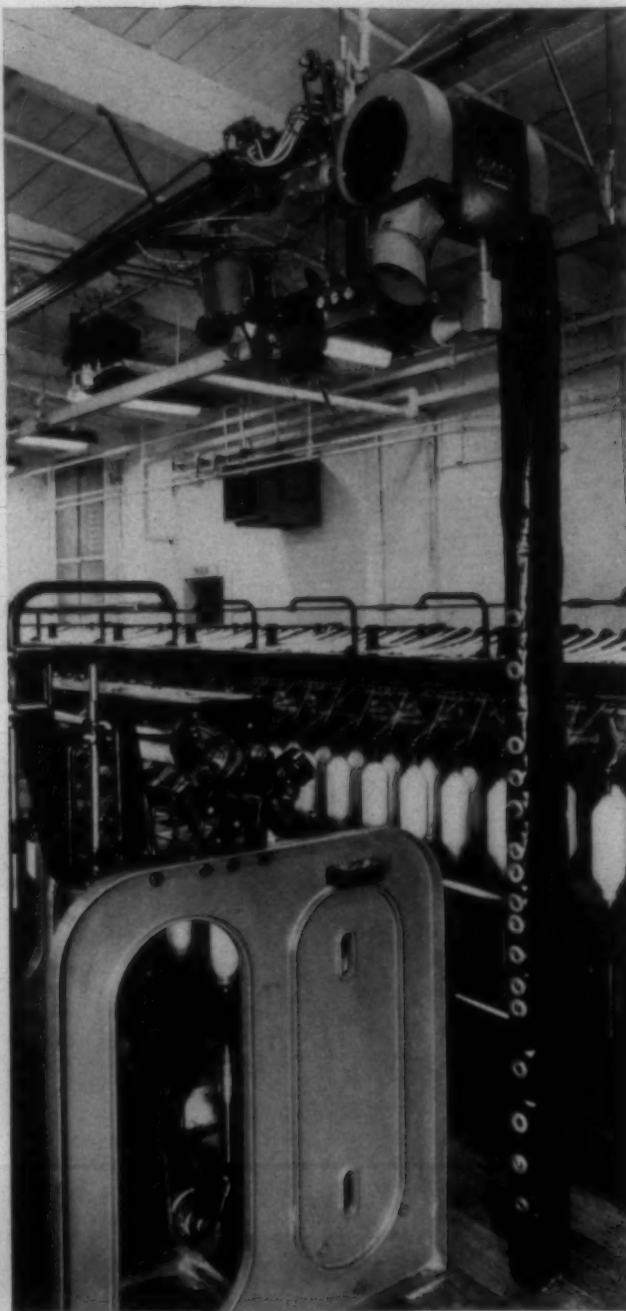
Helicone Loom Cleaners improve quality of fabrics by preventing waste accumulation on stop motions, drop wires, harnesses and reed caps.



Amco Loom Cleaners over Draper shuttleless looms. Sheeting is being woven at high relative humidity.



Amco Ceiling Cleaner provides automatic cleaning of ceiling, beams, walls and other surfaces. Excellent for card room areas.



Amco's electronically controlled Roving Frame and Ceiling Cleaner. Air delivery boot takes care of specific lint-collecting trouble spots.

## AMCO

SINCE 1888

**Air Conditioning Equipment — Textile Specialties**

American Moistening Company, Cleveland, North Carolina

Branches: Atlanta, Ga., Providence, R. I., Toronto, Ont.



Weaving problems?

## The P&F Technical Service Representative can help!

So many things can happen to interfere with smooth weaving operations! A machine can go out of adjustment, stuck ends can break the yarn, uneven tensile strength can cause warp stops, hard size problems can plague you. And while the results of the trouble may be obvious, the cause and cure are sometimes harder to discover.

That's where Penick & Ford comes in! We maintain one of the largest staffs of trained textile experts in the business. If you have used our Crown Thin Boiling Starch, Douglas Starch or Dextrine, Clearsol or Penford Gun, you know that P & F means quality. It also stands for service.

The Technical Service Representative who responds to your call is a skilled sleuth when it comes to detecting

textile troubles. After studying operations in hundreds of mills around the country, he knows the trouble spots and shortcuts, and he has more answers than you can shake a spindle at. In his kit are all the tools needed for scientific detection — thermometer, viscosimeter, pyrometer, refractometer, etc. And he is well armed with 500 Penick & Ford starches and derivatives.

Even if you have no specific problem, our technician may be able to make a cost-saving or quality-improving suggestion to advance your weaving efficiency. So why not take advantage of his experience? A letter or telephone call to our Atlanta Office will bring him promptly. The address is 1531 Marietta Blvd., Atlanta, Ga. Tel.: SYcamore 4-9521.



The P & F Technical Service Representative tests yarns and textiles for abrasion resistance, etc...



Checks out your warp sizing, finishing and glazing solutions in actual production conditions...



Studies machines and methods...brings his wide experience to bear on your whole weaving operation.

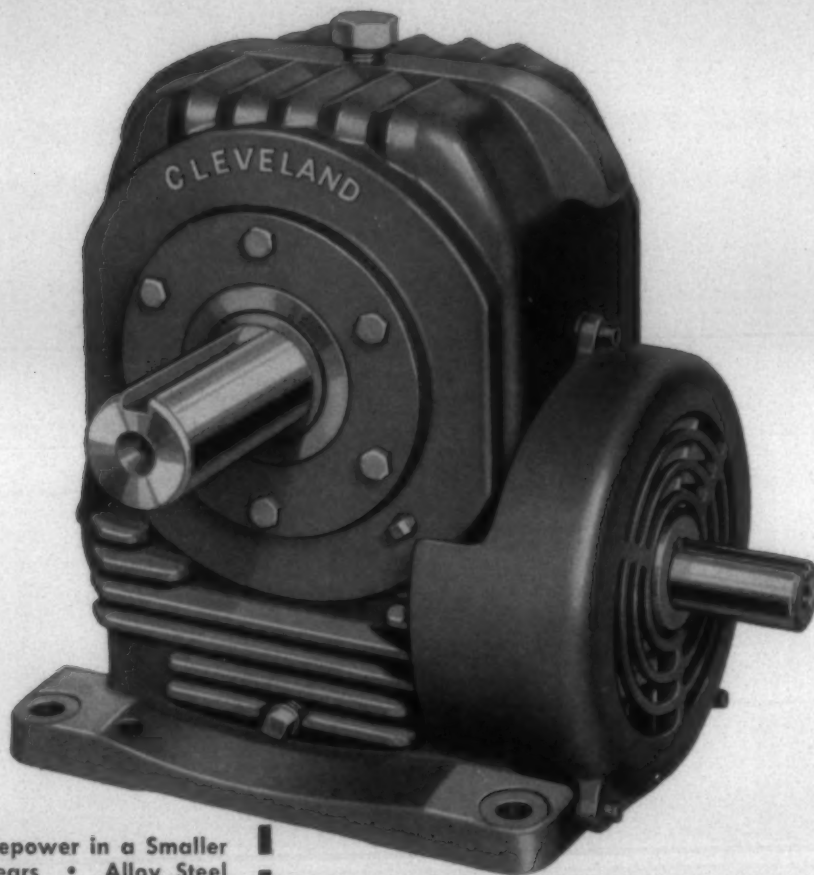


**PENICK & FORD, LTD.**  
INCORPORATED

here's the  
really new

Cleveland Worm  
and Gear

**SPEED  
REDUCER**



It was Designed to Provide: High Horsepower in a Smaller Unit • Centrifugally Cast Bronze Gears • Alloy Steel Worms Heat Treated By An Exclusive Process for Carrying Higher Loads • Fan Cooling for More Efficient Operation • Maximum Overhung Load-Carrying Capacity • Ribbed Housing for Maximum Strength and Heat Dissipation • Modern, Streamlined Design to Enhance Your Machine's Appearance.

Cleveland's new speed reducer line meets AGMA Standard 440.03 — which permits higher horsepower and torque ratings — provides you speed reduction at savings of 50% or more on cost per horsepower. All this, with no deviation from Cleveland's standards of quality and dependability.

Remember, this strikingly new line of fan-cooled reducers — now available from one to forty horsepower — incorporates all the design knowledge gained by Cleveland's engineers over the past 47 years — plus all the advantages of modern metallurgical techniques and advanced manufacturing processes. Consult your Cleveland Representative for the complete story on this new speed reducer — or write us direct for Bulletin No. 405. It details input horsepower and output torque ratings, service factors, application and load classifications, as well as general over-all dimensions.

**Cleveland Worm & Gear Division**

Eaton Manufacturing Company

3274 East 80th Street • Cleveland 4, Ohio

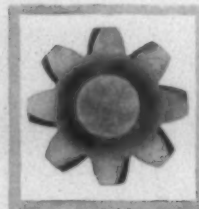


**CLEVELAND**

*Speed Reducers*

**Check these new exclusive Cleveland features**

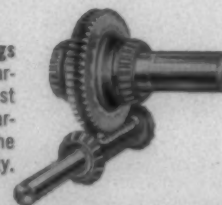
Cleveland's Worm's, heat-treated by an exclusive process, possess a high degree of hardness throughout their entire thread thickness — and well below the worm's root diameter. This gives maximum thread strength and resistance to wear without losing the advantage of a tough core of medium hardness.



Centrifugal cast bronze rims have a greater density and a higher hardness, giving increased resistance to wear and fatigue pitting. They are centrifugally cast integral with cast iron centers on 6" and smaller sizes. This permits strong mechanical keying of the two parts — without dependence on actual surface bond. Gear shaft extension diameters are especially large to permit greatly increased overhung load capacity.



Worm and gear shaft bearings are Timken tapered roller bearings, providing adequate thrust and radial capacity. Worm bearings are mounted directly in the housing bore for greater rigidity.





# For The Textile Industry's Use

## — NEW MACHINERY, EQUIPMENT AND SUPPLIES —

### Nylon For Tire Cord

The development of a new nylon designed for use in tire cord has been announced by The Chemstrand Corp., New York City. Designated as Type FRN, the new yarn is said to surpass any nylon yarns currently being used in fatigue resistance.

Tests conducted by the company are said to indicate an increase of 100% in the fatigue resistance factor as compared with other nylon yarns being produced commercially. This increased resistance to fatigue is expected to permit a better utilization of the fiber's other inherent qualities such as high strength and impact resistance.

(Request Item No. B-1)

### Door Interlocks

Three new door interlocks featuring a maintained-contact actuator position for checking hazardous electrical equipment have been announced by Minneapolis-Honeywell's Micro Switch Division in Freeport, Ill. The interlocks automatically cut power to electrical components when the service door is opened and restores it when the door is closed.

For checking equipment without using jumpers or cheaters, the actuating plunger is pulled to the maintained-contact position to keep power on. The firm said this technique eliminates "wiring around" the interlock, with the possibility the jumper might be forgotten, thereby defeating the purpose of the interlock. When the door is closed, the actuator automatically returns to its normal position.

Two series—22AC and 23AC—differ only in the shape of the mounting bracket and location of mounting holes. The 24AC model, which controls two separate circuits at the same time, uses two switches.

All three series feature high strength thermoplastic actuating rods which have self-lubricating and low-friction properties for extra long life. Actuator rods are available with tapped ends for adding extensions if needed.

Switches are rated for 10 amps. at 125

or 250 volts a.c.; 1/2 amps. at 125 volts d.c. and 1/4 amps. at 250 d.c.; 1/2 h.p. at 250 volts a.c. Actual travel is approximately .250" on push; .187" on pull.

(Request Item No. B-2)

### Stapler

A new stapler nailer, driving up to 2" heavy staples, has been introduced by Fastener Corp., Franklin Park, Ill. Designated as Model S-763, it is a modification of the Duo-Fast S-762 introduced last year. Design changes include greater drive power, an improved safety cap and a more positive lock.

The tool drives 16 gauge, galvanized staples from 1 1/2" to 2" long, at air pressures from 60 to 100 p.s.i., depending upon the hardness of the material. It is used for crating and packaging, expendable skids, boxes and wood frame assemblies.

(Request Item No. B-3)

### Tow Transformer

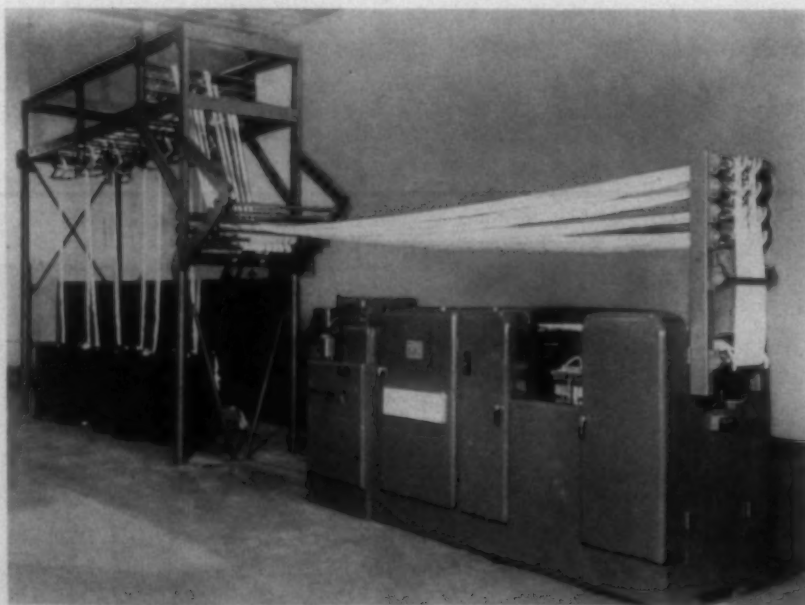
A new machine capable of commercially producing tow into tops for the production of long fiber yarns from both high bulk and normal fibers has

been unveiled by the Roberts Co., Sanford, N. C. Called the Roberts-Tematex Tow Transformer, it processes normal tops from normal tow such as Dacron, nylon, Dynel, Vycron, Fortrel, Kodel and rayon. It can be used to produce high bulk tops from normal tow such as Orlon, Acrilan, Creslan and Zefran without the need for second operation heat relaxing, and for producing high bulk tops from two component tow such as Orlon Sayelle.

The unit features a highly effective infeed with hydraulic weighting of the gripping rolls; an optional heated pre-stretch zone with automatic controls; the cutting unit that performs a fracturing operation through a helicoidal cutter; and a single head ParaDrafter gill box to perform one pinning operation to evenly distribute and parallelize the cut fibers.

The new machine can either cut the continuous synthetic filament, or heat stretch it before cutting the tow into fibers of predetermined lengths of from 2 1/4 to 8". It can make either a square cut diagram or a variable length cut diagram.

According to the company, the Tow Transformer also permits increased productivity; up to 15% more than ma-



The Roberts-Tematex Tow Transformer processes normal tops from normal tow.

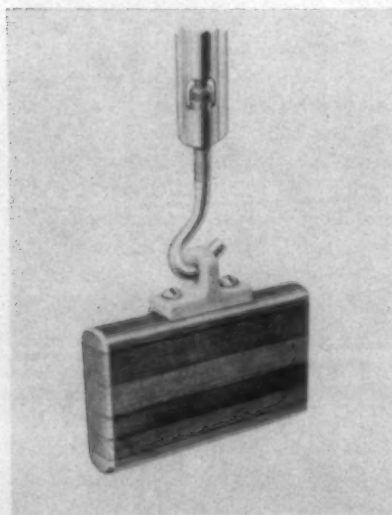
#### FOR THE TEXTILE INDUSTRY'S USE—

chines presently on the market. Some 2 million deniers can be in-fed to the machine and production is about 140 lbs. per hour. It delivers to a can 24 x 36", which will contain 40 to 70 lbs., depending upon the type of fiber.

A joint development of Roberts and its affiliate, the Tematex Co., Milan, Italy, the machine has been in operation for several months and 12 of them already are in mill operation in European countries.

(Request Item No. B-4)

#### Nylon Harness Eye



Steel Heddle Mfg. Co. of Philadelphia, Pa., has introduced a new nylon harness eye that is designed to eliminate metal-to-metal contact at this point, to eliminate scoring of wood or frame hang-up and to reduce the possibility of a frame drop. Two screws hold this eye on the stick, which adds considerably to its pull-out strength.

The wearability tests are said to have indicated remarkable endurance. Tests on cam looms, which frequently have an extreme wear condition, have shown absolutely no wear after 1,600,000 picks at a speed of 260 p.p.m., according to the company.

The new eye is made so that it contains a hook within its width, and comes in a small size for frames up to and including  $\frac{7}{16}$ " lumber, and in a large size for  $\frac{1}{2}$ " and heavier lumber. It is designed to replace any hook or eye now in use, and can be lined up directly over the old hole, giving perfect position on the frame and allowing new holes to be drilled for maximum hold-

ing power. The small eye is made to take up to a No. 8 hook, and the large eye to take up to a  $\frac{3}{16}$ " diameter hook.

(Request Item No. B-5)

#### Acid Blue

Alizarine Fast Blue RFE, a new bright reddish-blue acid dye, suitable for dyeing and printing has been introduced by Ciba Co., Fair Lawn, N. J. The new color is said to have excellent properties of light fastness and wet fastness on wool, silk and polyamide fibers. Ciba reports that it has been found particularly effective for dyeing knitting yarns and ladies' dress material and coatings to bright blue and baby blue shades. Its outstanding feature is its brightness.

The recommended method of application for the new dye is by the acetic acid/Glauber's salt method, although it can be effectively applied by all methods normally employed in applying acid dyes.

(Request Item No. B-6)

#### Dyeing Latex Backings

The Naugatuck Chemical Division of the U. S. Rubber Co., New York City, has developed a technique for dyeing latex backing for fabrics the same color as the fabric with the same dyestuffs. "Color acceptors" discovered by company researchers, are blended into standard latex compounds to modify the compounds so they will accept dyes.

Conventional latex backings will not take dye, the company points out, so they remain white or a drab yellow after the dyeing process. In loosely woven fabrics this becomes a problem since the latex is visible through the surface of the fabric. Even in tightly woven mate-

rials this lack of color in the backing may be undesirable.

To overcome this disadvantage, some conventional latex backings have a pigment or dyestuff blended into the compound before curing. However, this requires separate batches of the pigmented compound for each color run, U. S. Rubber points out.

Compounds containing the new color acceptors can be colored with the standard dyestuffs used on nylon, acetate and other fibers. They are now being blended into Lotol compounds produced by Naugatuck Chemical at its Gastonia, N. C., plant.

(Request Item No. B-7)

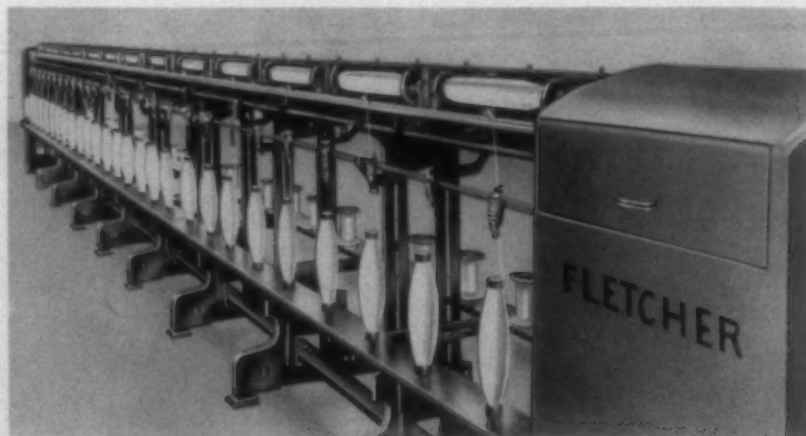
#### Stronger Tyrex

Industrial Rayon Corp., Cleveland, Ohio, has announced the development of a new and stronger Tyrex rayon tire cord that is described as particularly suitable for heavy duty tires. The new Tyrex is 10% stronger than the present cord and is said to have other substantially improved characteristics. The new rayon will go into production early this year. It will be available at regular prices and in all deniers, the company says.

(Request Item No. B-8)

#### Winder-Redraw

The 1961 model of the Fletcher Speedex Winder-Redraw is now in production, according to Fletcher Industries Inc., Cheltenham, Pa. The Winder-Redraw uses the lathe principle to hold the bobbins on fixed centers, which are designed to provide precision rotation and eliminate vibration. A smooth traverse motion gives perfectly wound bobbins at higher speeds than those pro-



The Speedex Winder-Redraw runs at a speed of 500 y.p.m. on 8-oz. bobbins.



A staple in textile manufacturing, NEKAL NF is an anionic liquid known for high quality and all-round efficiency as a wetting and penetrating agent. The news is: *the wetting ability of Nekal NF has been stepped up 50%* with no loss of efficiency in these other important directions...

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- *low foaming properties*

Nekal NF, an alkyl naphthalene sulfonate, may be used with confidence in continuous padding and long-liquor dyeing with vat, sulfur, and direct colors...also in package, beam, hosiery, jig, and other types of dyeing operations on various yarns and fabric constructions.

For further information and samples, get in touch with any General Dyestuff Company office.



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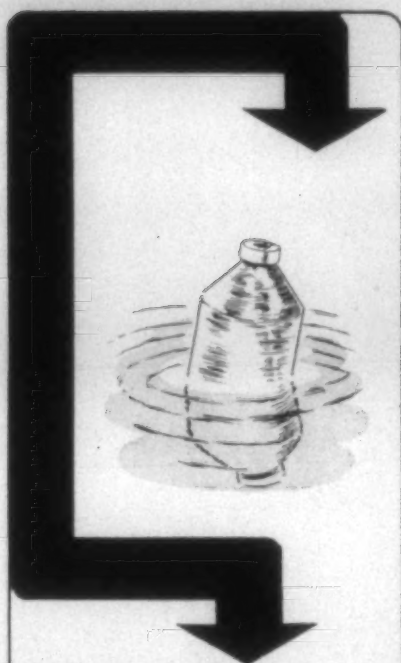
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duced on other winders, the company reports.

Another feature of the unit is that the yarn area requires no lubrication, thus producing cleaner yarns and eliminating any danger of oil damage. The winder will produce three styles of bobbins, which can be accomplished by a minor change in the traverse motion.

The frame runs at a speed of 500 y.p.m. on 8-oz. bobbins and up to 750 y.p.m. on 2-lb. bobbins. Higher speeds are achieved on special tapered warping or shipping bobbins.

(Request Item No. B-9)

### Reactive Dyes

Three new colors have been added to its line of Cibracron reactive dyes by Ciba Co., Fair Lawn, N. J. They are Brilliant Blue C4GP, Scarlet 4GP and Brilliant Orange GP.

Brilliant Blue C4GP is designed to yield extremely bright reddish-blue shades on natural cellulosic fibers. It is said to provide particularly good qualities of fastness to light and chlorine when used on cotton. The recommended method of application to produce a very pale to full shade on cotton is by the Thermofixation and single-pad steaming method. For pale and medium shades the pad-jig and pad-roll methods can be used. The pad-steam method should be used for pale shades only, Ciba says. Dyeing by the exhaustion method is not recommended.

The new blue is said to be easier to apply than phthalocyanine bright blue dyes but has similar qualities of fastness. With the new dye unfixed color is easily washed off.

Used as a printing color, the new dye is said to offer a brilliant blue shade and is easy to apply. It offers outstanding fastness to light, wet fastness and chlorine and is reported to have good washing-off properties with very little sensitivity to electrolytes.

Scarlet 4GP is described by the company as a reactive dye of outstanding purity and brilliance closely approaching orange in shade. Particularly suited for dyeing cotton and rayon, the new dye is also said to be an important printing color. It is said to make an ideal base for orange and mode shades when used on wool.

For cotton and rayon the company recommends application by padding

methods. Yield by pad-steam is particularly good and the yield can be further increased on full shades by prolonged steaming up to 60 seconds. Dyeing by single pad steaming on rayon is said to be particularly good.

The new scarlet has exceedingly high solubility and is free from copper and manganese, Ciba reports. It is easily dischargeable to a white and the dye covers dead cotton and rayon of varying affinity. The color possesses good wet fastness and synthetic resin finishes do not impair its light fastness. Unfixed dye is easily removed.

As a printing color it can be combined with other Cibracron dyes and is easily washed off. The color does not bleed into the white and is dischargeable regardless of depth.

Brilliant Orange GP is designed for dyeing and printing on cellulosic fibers. Brighter than Brilliant Orange G, the new dye is described as fast to light, washing, perspiration and dry cleaning. A particular advantage cited for the new color is the ease with which the unfixed color can be washed away. It is also suitable for goods to be rubberized or resin finished.

Although designed for dyeing natural cellulosic fibers by the usual continuous methods, the new orange can be effectively applied to wool either by itself or in combination with other dyes when the Neovadine method is used. While regenerated cellulosic fiber can be dyed by both padding and batch-wise exhaustion, the company recommends the latter.

In combination with other dyes, the new dye has been found excellent for the production of scarlet shades in combination with Cibracron Scarlet and Cibracron Brilliant Red brands.

(Request Item No. B-10)

### Truck Flooring

A heavy-duty laminated hardwood flooring for trucks and trailers has been introduced by the E. L. Bruce Co., Memphis, Tenn. Called the Bruce Dura-Wood laminated flooring, it is designed to offer substantial savings in installation and maintenance costs.

Made of selected oak, the flooring utilizes the latest electronic laminating processes and new waterproof glues to provide full trailer or truck-length boards, up to 12" in width.

Shipped pre-cut to the buyer's exact specifications, the new flooring is avail-

able with shi lap, center-match or special machining. Extra durability and serviceability is gained with the edge-grain surface of Dura-Wood.

Installation is performed in a fraction of the time required to install an ordinary floor, according to the company.

(Request Item No. B-11)

### Pattern Perforator



Eastman Machine Co., Buffalo, N. Y., has introduced a new Model MP pattern perforator. This model is called their "multi-purpose" machine because it is designed to save considerable time in the making of duplicate markers by several methods. The saving is the result of two innovations in the perforator. One is a free-wheeling clutch that stops the needle and enables the operator to make single punches where needed, and to move the machine about without taking it off the work. The other feature is the use of a solid, sharp-pointed needle, similar to steel phonograph needles, to make pin-pointed impressions when wanted.

The single-punch operation is designed to allow the operator to punch drill-holes, sizes, style numbers, etc., through the pattern, as well as to trace sharp turns, curves and corners more accurately and with greater ease. This tracing of the sizes and other information saves time and trouble because the figures, etc., are photographed at the same time as the pattern is copied instead of writing the information by hand. The same perforation can be used with powder-stamped duplicates.

With the sharp-pointed needle, the

perforator can mark up to 50 sheets of special no-carbon paper. The back of this paper has a fine covering of chemically coated microscopic drops of ink. When the needle breaks this coating, the ink leaves a row of blue dots on the paper below it. The force of the electrically-driven needle is so great that up to 50 markers can be made at one time, with its resultant saving in time and labor costs.

The new Eastman perforator is lightweight, 35% more powerful than previous models, compact, and stands but 7 1/2" high. It is easily handled, and can follow any shaped line including small inside curves, as fast as the operator can handle the machine, according to the company.

(Request Item No. B-12)

### Positive Flow Boiler

A new positive flow boiler has been introduced by Orr & Sembower Inc., Reading, Pa., called the Powermaster Positive Flow, Model PF. The boiler is of three pass design, with a combination burner located on the left side of horizontal center. No tubes run directly over or under the burners. This is said to eliminate the danger of heat damage caused by stagnant water and sludge that has accumulated in the bottom of the furnace.

Feed injection and natural thermal circulation augment each other in the new design. The flow sequence develops as relatively cool water is directed down through the third pass, following the normal downward movement of natural circulation to the bottom of the boiler, then rising through the second pass and around the furnace.

One of the most important developments incorporated in the boiler is a new burner. It is designed so that it can be easily converted in the field to burn either oil or gas without modification. The oil burner may be quickly converted to a gas burner or a combination unit, and the gas burner converted to oil or combination with equal ease. The unit is not a compromise between the two burners, but is built to burn either fuel with a high efficiency, according to the company.

Other features of the new boiler include a hinged front cover with fasteners, which can be opened in less than two minutes without disturbing the burners, wiring or piping. A split back cover that forms a separate seal in a

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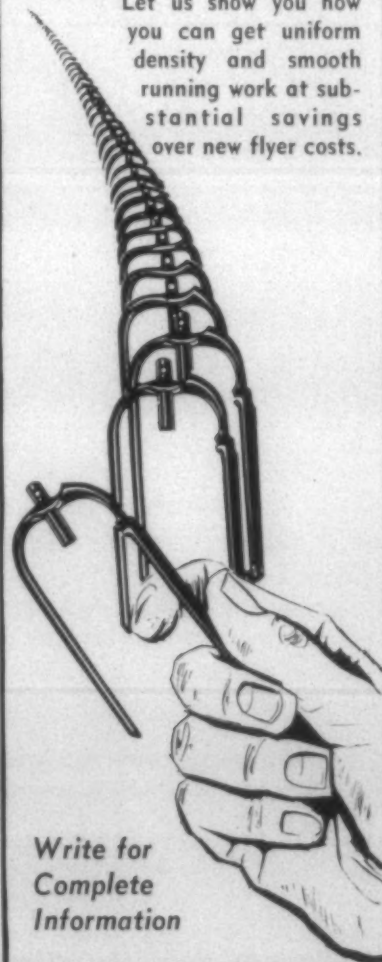
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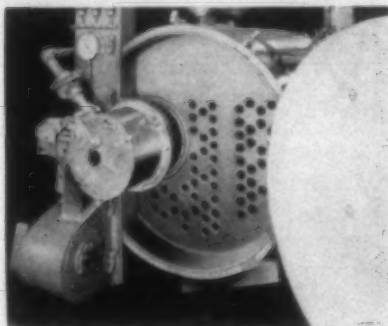
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single plane is said to provide positive protection from short-circuiting of combustion gases. All fireside and waterside surfaces are accessible for inspection.

A dryback design for the rear covers uses a new type of pre-fired high-temperature refractory liner, backed with a light-weight insulating material. The refractory provides high resistance to flame and maximum insulating qualities.



Orr & Sembower's new positive flow boiler features a hinged cover with quick opening fasteners, which may be opened for access to the heating surface in less than two minutes without disturbing burner, wiring or piping.

And the Powermaster has a feature that is said will reduce the noise level substantially. This is accomplished by the use of a rear-facing inlet located near the top and connected through a duct to a blower mounted at the base of the boiler.

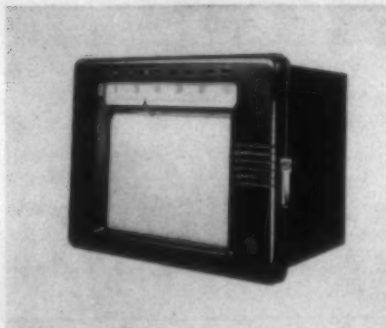
Orr & Sembower plans to begin production of the new boiler in five standard sizes: 50, 60, 70, 80 and 100 boiler horsepower.

(Request Item No. B-13)

#### Recorders

The Wheelco Industrial Instruments Division of Barber-Colman Co., Rockford, Ill., has announced the development of two new instruments—a 3-dial Span and Zero recorder and a new recorder with five steps of automatic zero suppression.

The 3-dial Span and Zero recorder requires no external calibrating means. The zero and span settings are on calibrated dials. Span and zero settings are accurate to .5%. Another feature of the recorder is that the two settings mean that an unknown can be measured by changing the dial settings without cumbersome time-consuming calibration. The unit has one millivolt span and one second cross chart speed. A Zener diode constant voltage source is designed to



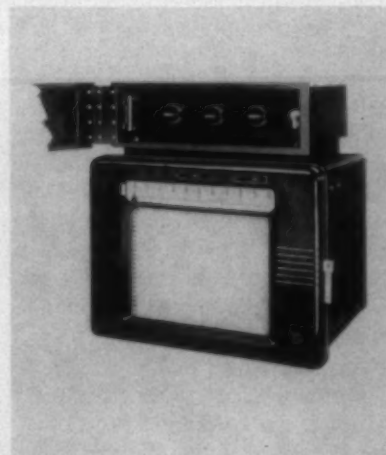
The new three-dial span and zero recorder by Wheelco eliminates external calibration by having the settings on calibrated dials.

hold the guaranteed accuracy even in the one millivolt span.

There are only three adjustments to be made—the calibrated Span Vernier, the calibrated Zero Vernier and the Amplifier Gain Control. The Zero Vernier provides any value from 0 to 50 millivolts of suppression for exact settings. The span is continuously adjustable from 1 to 20 millivolts. Zero suppression and span circuits operate independently of one another.

The five-step recorder was designed specifically for research and industrial laboratories. It is called the Automatic Extended Range Recorder and is designed to measure unknown and widely varying levels of potential. Having from 2 to 5 automatic steps of zero suppression, the zero is automatically shifted to accommodate any signal within a specified range. As the variable exceeds or goes below the span, the scale is automatically extended or contracted.

This recorder is equipped with two pens, the recording pen and the step (marker) pen. The step pen, which is attached at the left of the recording chart, indicates at which step of zero

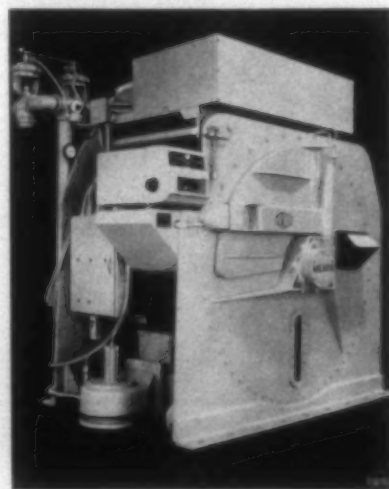


This five-step recorder is designed to measure unknown and widely varying levels of potential.

suppression the recorder is operating. Any span between 2 and 250 millivolts may be selected. A total of 500 millivolts is maximum. This unit has an accuracy of .25% of entire span and a sensitivity of .1% of each span. A cold junction compensation for thermocouple direct readings is available if desired. There is no loss of accuracy when this recorder moves from one span to another.

(Request Item No. B-14)

#### Washer-Extractor



A new 300-lb. capacity washer-extractor has been developed by the Pellerin Milnor Corp., New Orleans, La. Some of the features incorporated in the machine include a large, convenient loading door, and high-speed, two-stage extraction. It has the ability to perform short duration intermediate extractions in only one minute. Other features are an automatic supply injection and a low electrical service for operation. The new Washer-Extractor will operate on a 100 amp., 220-volt, 3-phase, 60-cycle electrical circuit.

(Request Item No. B-15)

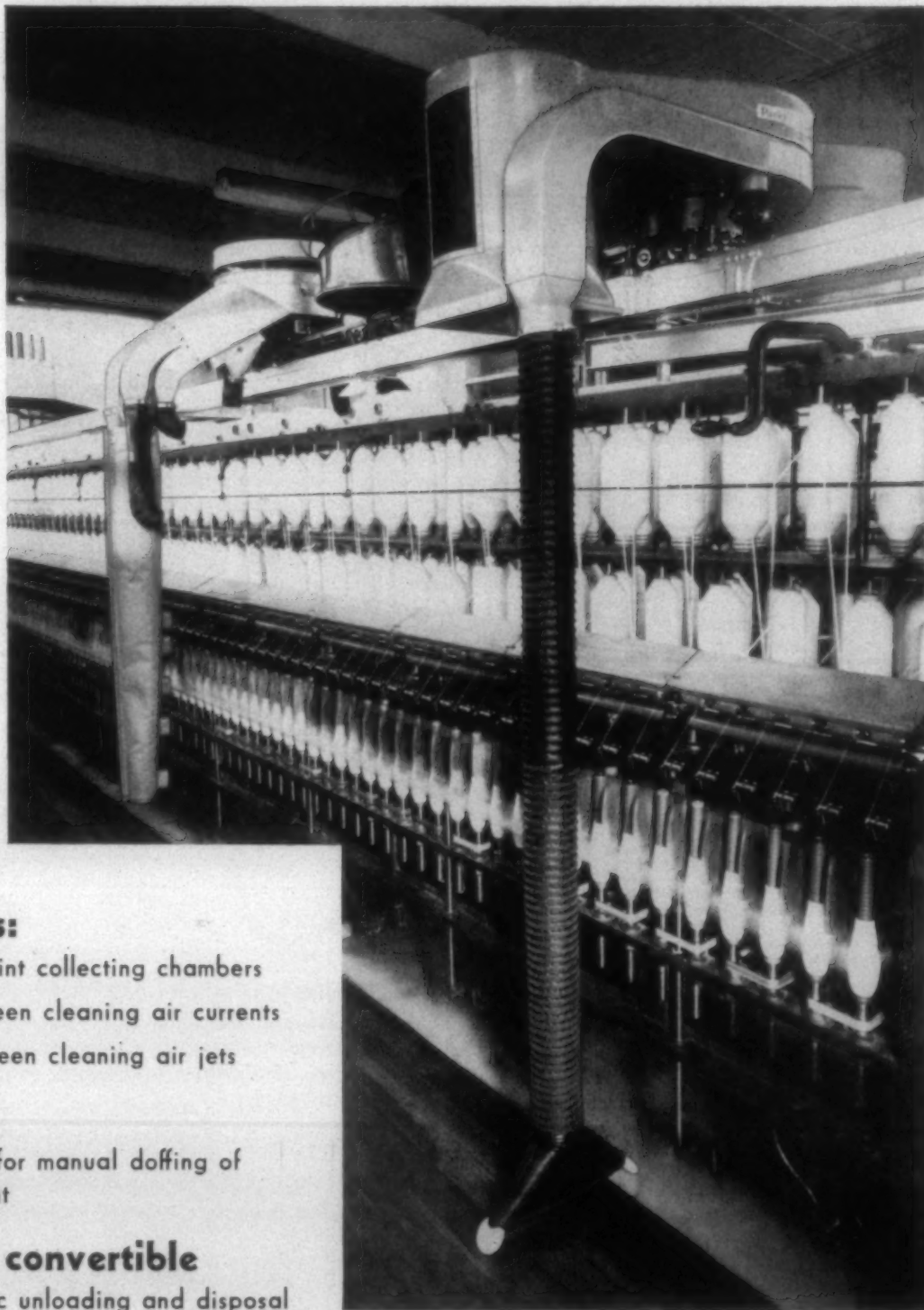
#### Nylon Fixing Agent

A new organic condensate, Cenekol NCS, has been introduced as a fixing agent for the dyeing and finishing of nylon by the Althouse Chemical Co., Reading, Pa.

The new agent is said to greatly increase the fastness to washing of neutral acid type dyes used in nylon finishing. Cenekol differs from other nylon fixing agents in that it is more soluble in the presence of electrolytes such as common salt, Glauber salt and calcium salts. It can be applied directly in the dyebath



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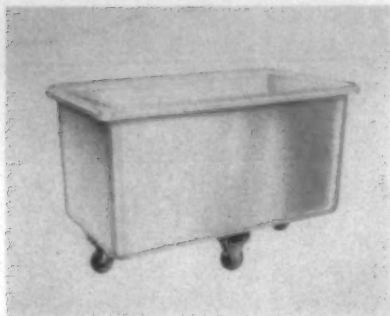
422

#### FOR THE TEXTILE INDUSTRY'S USE—

after the dyeing is at approximately the desired shade and depth, giving the dyer control of the shade throughout the entire dyeing and treating processes.

(Request Item No. B-16)

#### Fiber Glass Box



The Hamilton Caster & Mfg. Co., Hamilton, Ohio, has announced the development of a new light-weight fiber glass box truck for bulk handling of packaged goods, bolts of cloth and dry or wet materials in the textile industries. Molded of fiberglass-reinforced polyester resin, the watertight box structure resists corrosion from water, oil

and mild acids or alkalis. The inside surface is perfectly smooth with rounded corners to prevent dust and dirt accumulation. In addition, the unit can withstand steam cleaning and operational temperatures of  $-40^{\circ}$  to  $212^{\circ}$  F. The tapered design of the box body permits nesting units when empty.

Three sizes ranging in capacities from 16 to 21 cu. ft. are offered. Tilt-mounted or level-mounted swivel and rigid casters can be furnished in a choice of 4" or 5" replaceable rubber-tired or cushion tread solid rubber wheels. Thread guards are available if desired.

(Request Item No. B-17)

#### Ceramic Fiber

The Carborundum Co., Niagara Falls, N. Y., has introduced its new ceramic fiber, Fiberfrax. The new fiber is a mix of high grade alumina and silica sand which is heated to  $3,900^{\circ}$  F. and poured in a molten stream the size of a lead pencil. The stream is struck with a blast of air or spun into fibers of varying lengths that look very much like white wool.

The fibers are fabricated into over 40 forms such as textiles, blankets, rope and molded form. The material is designed to withstand continuous operating temperatures up to  $2,300^{\circ}$  F. Uses include combustion chamber linings for oil and gas fired furnaces, industrial heat treating and brazing furnaces, high temperature gaskets and packing and temperature gas filtration.

(Request Item No. B-18)

#### Print Carrier

Improved brilliance and sharpness of print on polyester fabrics is said to be made possible by a new carrier developed by The Harshaw Chemical Co., Cleveland, Ohio. Called Thermoprint, this new carrier is designed for use where the thermosol method is used for development of the print.

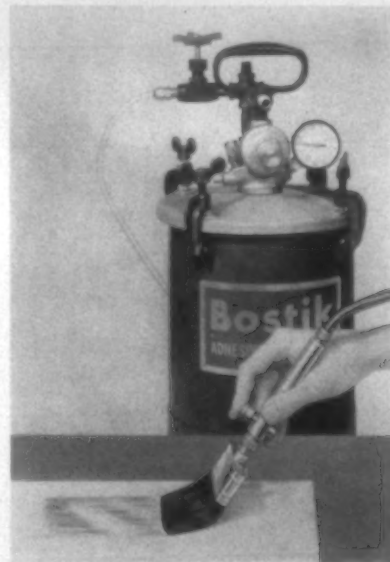
When the new product is used, printed fabrics submitted to a minimum of  $300^{\circ}$  F. for five minutes are said to show a brilliance and sharpness of mark which was previously hard to obtain. The carrier does not leave any adverse effect in the fabric after the developed prints are washed and finished, Harshaw reports.

While it is primarily intended for the thermosol method, according to the company, Thermoprint gives equal results

with the steaming and aging methods and eliminates the need for several types of printing assistants. It is supplied in the form of a free-flowing white paste to be added by volume directly to the print paste.

(Request Item No. B-19)

#### Adhesive Applicator



An adhesive applicator with a new push-button control on the brush barrel, the Bostik Adhesive Applicator—Model B, has been developed by the B. B. Chemical Co., Cambridge, Mass.

The applicator feeds solvent and water-based adhesives through a flexible hose directly into the brush under ordinary factory air pressure. It includes a pressure tank which is designed to dispense adhesives of average viscosity at 20 p.s.i. and has an air regulator which allows accurate setting at any desired pressure. Three outlets on the tank permit installation of as many as three hoses, enabling up to three operators to work from one unit.

The push-button flow control is supplied as standard equipment with all applicators or may be ordered as a separate part.

(Request Item No. B-20)

#### Nylon-Leather Belting

A new belting, Page-Lon, has been introduced by Page Belting Co., Concord, N. H. The belting, which combines Super-Polyamid (nylon) with leather, is said to make possible greater production and lower maintenance. Its elasticity enables the belting to absorb shocks and to lessen bearing pressures.

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Its light weight makes possible speeds of up to 10,000 f.p.m. The new belting is also said to provide greater tensile strength. It is available in narrower widths which are important on cone drives and drives without outboard bearings.

The new belting is said to be particularly adaptable for short center drives with high pulley ratios, serpentine, crossed and quarter turn drives. In many instances it is replacing V-belts, chain, gears and timing belt drives, as well as conventional rubber and flat leather belting. With hot press, Page-Lon can be made endless in the field and be operating within two hours.

(Request Item No. B-21)

### Record Disposal



Positive destruction of obsolete but confidential records has been solved by the Auto-Shred, according to the Industrial Shredder & Cutter Co., Salem, Ohio. The new machine utilizes an automatic feed shredder, housed in a fiberglass case. It is mounted on a matching metal base containing a lightweight aluminum collection bin to assure neat, clean operation. The bin will hold up to seven normal sized waste baskets of paper. The base is equipped with casters so that it can be rolled easily.

An important feature of the Auto-Shred, the manufacturer claims, is the automatic feed hopper which eliminates constant hand feeding. Up to 100 sheets of loose paper, cards or tickets can be stacked in the hopper. Stapled, pinned or folded papers can be fed through a separate gravity feed which operates simultaneously with the automatic feed. Papers are shredded into 1/4" strips. Clips and pins are cut without damage to the cutter. In addition, geared drives

allow use of 1/3 h.p. motors on any 120-volt line, and eliminate danger of overloading electrical circuits. All operating mechanisms are completely enclosed.

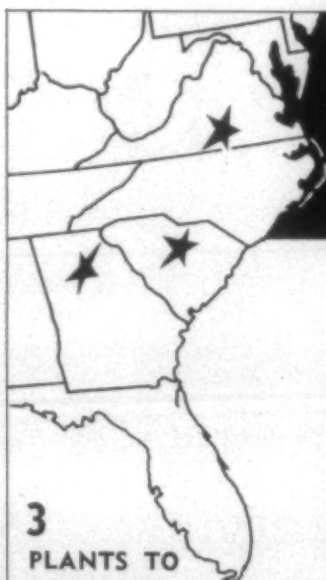
(Request Item No. B-22)

### Light-Resistant Nylon

The Chemstrand Corp., New York City, has introduced a light-resistant factor for all Chemstrand nylon fibers including Cadon nylon multilobal yarn and Cumuloft nylon, a continuous fila-

ment textured yarn. According to the company, the new R-factor included during yarn manufacturing is designed to substantially increase the resistance of the nylon yarns to degradation by sunlight or fluorescent light.

The company noted that after 30 days exposure, the light-resistant type Chemstrand nylon lost only 4% of its strength and 2% of its elongation, whereas the older type yarn lost 35% of its strength and 54% of its elongation. The new R-factor is said to be particularly valuable in plants where packages remain in



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creels for two weeks or longer, with stand-by packages in creels for from two to four weeks as is the case in many texturing, hosiery and other types of textile operations.

(Request Item No. B-23)

#### Pipe Thawing



Hobart Bros. Co., Troy, Ohio, has developed a small portable transformer that is designed to thaw frozen pipes by using ordinary a.c. electric circuits—110 or 220 volts, single-phase, 50 or 60 cycles.

The Porta-Thaw is complete with a 10' power cable with plug and receptacle and two 20' thawing cables with lugs and pipe clamps. The unit measures only about 17 x 12 x 11" and weighs 63 lbs. Convenient carrying handles are provided.

The transformer is rated at 300 amps., 10 volts on 100% duty cycle. Four output terminals of long-life bus-type provided for three thawing steps—high, medium and low. Operating instructions are permanently mounted in plain view, on top of the case.

There are no terminal connections between the power line and the output terminals making it as safe to operate as a household appliance, the company reports.

(Request Item No. B-24)

#### Non-Fray Coating

A new non-fray coating for cotton, wool, rayon, Orlon and other synthetics called Javatex Non-Fray has been introduced by Java Latex & Chemical Corp., New York City. The coating may be applied by dipping, roller coating or spray and is designed to dry clear and

transparent. The Javatex coating is designed to prevent threads and fibers from unraveling. It is described as non-blocking and resistant to dry cleaning and washing.

Recommended uses for the coating are in upholstery fabrics, ribbons, woven labels, shoe fabrics and other materials. It is available in 55-gallon drums as well as one and five-gallon containers.

(Request Item No. B-25)

#### Wire Mesh Containers



Union Steel Products Co., Albion, Mich., has announced the introduction of its USP Palletainers to the textile industry. These heavy-duty steel mesh containers offer several features that are designed to facilitate textile handling. The safety of the steel wire mesh, special protective finishes, ease and simplicity of space-saving storage and rapid movement or shipment of unitized loads are among these features.

The company reports that the Palletainers prove valuable for processing through all stages of wet and dry finishing, storage and intermill shipment because of the protective snap-in liners of duck, canvas and polyvinyl or vinyl canvas. The units are available in standard or special sizes and types.

(Request Item No. B-26)

#### Cots, Apron

Dayco Textile Products Co., Greenville, S. C., has introduced two new cots, the X-35 and the X-98, and a new apron for spinning frames, the X7. Compounded with an entirely new element, the X-35 is designed to give a

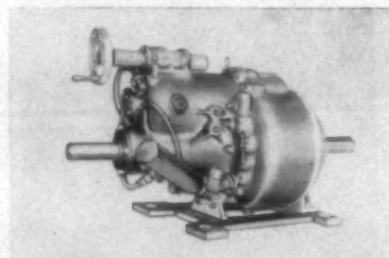
positive grip and also to break up surface tension on all fibers.

The X-98 is said to introduce a completely new surface formulation and has proved a superior performer on the finest and coarsest yarns. When used in combination, with the X-35 on the backline and the X-98 on the front, the cots are said to be all purpose. Handling yarns of any size from 3s to 140s on any type of system, they render greater yarn uniformity and a greater efficiency, according to the company. The cots reduce static electricity for synthetics and give cleaner spinning.

The X7 apron was designed to combat cracking by use of a new skin-like surface on the outer surface of the apron. This is reported to maintain finger-tip control for smoother, easier drafting of all types of fibers.

(Request Item No. B-27)

#### Hydraulic Transmission



Roberts Electric Co., Chicago, Ill., has a 10-h.p. variable speed hydraulic transmission designed to permit low cost automation and modernization of existing machinery as well as development of new equipment to increase production and save money. The unit also provides variable speeds from 0-to-1,600 r.p.m. for high-torque, heavy-duty applications such as textile machinery, winders, compressors, mixers, blowers and lifts and hoists.

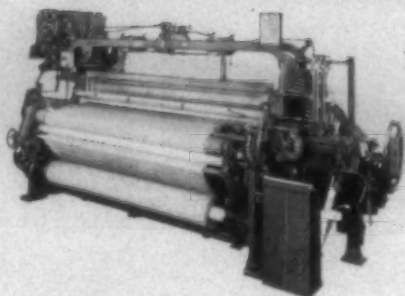
Other features of the unit are a drive of 1,800 r.p.m. with any 2 to 10 h.p. motor, precise speed selection by rotation of a hand wheel to give any speed within the range of the unit, smooth and constant speeds, a neutral position and controls that are easily altered for remote control.

The dimensions of the transmission are 22 x 13 x 16" and it has a weight of 100 lbs. The input shaft is 1 3/8" dia. x 4" length and the output shaft is 1 3/8" dia. x 4" length. The unit is also equipped with ball and roller bearings throughout.

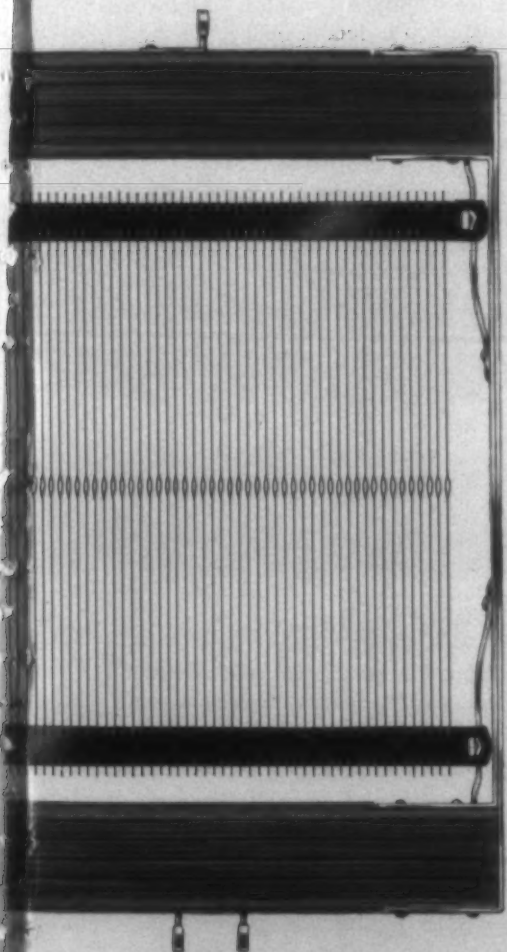
(Request Item No. B-28)



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Supply Co., Dallas, Texas • Albert R. Breen, Chicago, Ill.



## For the Mill Bookshelf

### Machinery Cleaner

A service bulletin, No. 17B, describing its Oakite RR Cleaner has been published by Oakite Products Inc., New York City. The product, designed to remove stubborn soils such as burned-on oil, heavy grease and dirt, may be used in the cleaning tank or steam cleaning operations. The cleaner is said to be safe for steel, iron, brass, magnesium and other metals, but is not recommended for aluminum or zinc.

(Request Item No. B-29)

### Steam Temperature Control

Bailey Meter Co., Cleveland, Ohio, has published a new 4-page illustrated brochure, Bulletin 543, describing the operation of its units for the accurate control of high steam temperatures.

Three detailed diagrams explain the

operation and control principle of desuperheater water control, and burner tilt and desuperheater water control. Graphs show the effects of steam temperature control by desuperheating and the effects of steam temperature control by tilting burners and desuperheating.

(Request Item No. B-30)

### Power Centers

General Electric Co., Schenectady, N. Y., has issued a 12-page bulletin, GEA-7080, on its Cabinetrol Power Centers. The bulletin describes how the power centers apply when standard motor starters are interlocked and sequenced with specialized control functions for operation of complex industrial processes.

Illustrated in the release is how the unit is designed to centralize such functions as motor starting and control, power switching, circuit relaying and sequencing, motoring process instrumentation and control of lighting and air conditioning. The equipment can be built for power concentrations up to 4,000 amps. The bulletin explains personnel and equipment safeguards of the center as well as performance advantages of the unit.

(Request Item No. B-31)

### Overhead Conveyor

A new 6-page brochure describing the Rapistan power and free methods of transporting materials from one work station to another has been released by Rapistan-Keystone Inc., Detroit, Mich.

The booklet contains illustrations of mill installations and parts of the power and free conveyor system. It also includes some advantages that can be realized by the use of this system.

(Request Item No. B-32)

### Rust Prevention, Removal

Tested and proved procedures for preventing and removing rust under almost any conditions are detailed in service bulletin No. 16B, issued by Oakite Products Inc., New York City.

Some of the problems included in the

bulletin are the safe removal of rust from raw stock by the use of inhibitors or inhibited acid compounds and the prevention of hydrogen embrittlement during rust removal by the use of alkaline derusting agents. Other problems covered include the simultaneous removal of rust and grease while conditioning surfaces for painting and the prevention of rust between processing operations and during periods of storage. The final topics are the washing of parts by machine or tank immersion with simultaneous protection against rust and anti-rust conditioning of steel in preparation for painting.

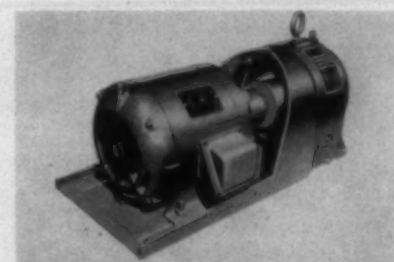
(Request Item No. B-33)

### Acetylene Derivatives

A ready-reference data sheet on all of the company's high-pressure acetylene derivatives has been published by Antara Chemicals, a division of General Aniline & Film Corp., New York City. Entitled "High-Pressure Acetylene Derivatives," bulletin AP-60-3 gives details about PVP, PVP/VA Copolymers, PVP-Iodine and Vinylpyrrolidone. Other chemicals contained in the pamphlet are Methylpyrrolidone, 2-Pyrrolidone, Butyrolactone, 1,4 Butanediol, Butenediol, Butynediol and Propargyl alcohol and halides. Chemical structures, physical forms and descriptions are given, as well as a list of properties and end uses.

(Request Item No. B-34)

### Gearmotors, Speed Reducers



Its full line of gearmotors and Line-O-Drive coupled speed reducers are described in a new 6-page bulletin from Howell (Mich.) Electric Motors Co.

The gearmotors described in the brochure range from 1 to 150 h.p., a.c.;



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single and triple reduction; with speeds as low as 7.5 r.p.m. They are available in A.G.M.A. Classes I, II and III; in open, enclosed and explosion-proof enclosures; with a wide variety of mountings. The gearmotors have all N.E.M.A. standard start-run characteristics and have either a parallel shaft or right-angle drive (up to 30 h.p.).

The Line-O-Drives are rated from 1 to 75 h.p., a.c., with output speeds as low as 1.2 r.p.m. They can be obtained either flange or foot-mounted; with open or enclosed explosion-proof motors and standard N.E.M.A. starting torques.

Two pages are devoted to selection tables which tabulate various output speeds for each h.p. rating in all three A.G.M.A. classes. The bulletin lists numerous typical applications but points out that uses are for any drive requiring slower than motor speeds.

(Request Item No. B-35)

### Materials Handling Ideas

A new 80-page booklet, "Handbook of Cost Cutting Materials Handling Ideas," is being made available by the Automatic Transportation Co., Chicago, Ill. The booklet contains discussions of current materials handling problems—giving the pros and cons on such subjects as narrow versus wide aisles, walkies versus rider-type trucks, special versus standard trucks, pallet versus palletless handling. It describes how to select the right truck for the job. The brochure includes truck battery calculator charts for selecting the correct battery plus case histories of proven cost-cutting truck applications.

(Request Item No. B-36)

### V-Belts

Design features and performance advantages of its V-Belts are detailed in an 8-page bulletin (M-201) issued by the Manhattan Rubber Division of Raybestos-Manhattan Inc., Passaic, N. J. Included are R/M Condor V-belts and patented R/M FHP V-belts, both offering special designs for heavy and light duty, short and long center applications.

In addition to ordering information and specifications, the bulletin includes graphically illustrated sections on the comparative advantages of straight sidewall construction in V-belts.

Also described in the publication are Condor Double-V belts for serpentine drives; R/M CX fully molded V-belts, notched for efficient use with small

sheave, high speed drives; and the Poly-V Drive, which requires only 3 cross-sections to fit all drives from 1/20 h.p. to 1,700 h.p.

(Request Item No. B-37)

### Multiple Packaging

The use of multi-packs to boost sales and profits is illustrated in a new 16-page booklet offered by American Viscose Corp.'s film division. The booklet outlines the advantages of multi-packs to the consumer, retailer and manufacturer. It also includes a wide variety of multiple packaging ideas designed to facilitate handling and increase sales and profits. Also highlighted is the multiple packaging tie-in with pricing policies and special product promotions.

(Request Item No. B-38)

### Social Security Data

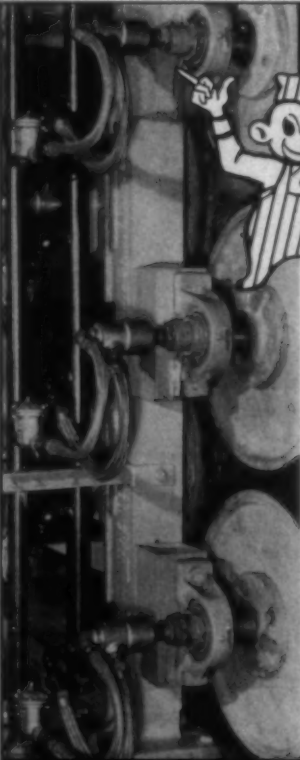
A pocket-sized handbook, "Your New Social Security—1961 Edition," has been published by the Commodity Research Publications Corp., 82 Beaver St., New York 5, N. Y. The book is designed to clearly and thoroughly explain employee benefits under the recently amended

Social Security Act, effective in 1961. Designed for mass employee distribution, it is reported to be completely authoritative, having been checked for accuracy by the Social Security Board prior to publication.

Complimentary review copies are available to company and corporate officers and personnel directors. To obtain a copy, write the request on company letterhead to the publishers. Quantity and price per copy are as follows: 10 to 49, 28 cents; 50 to 249, 23 cents; 250 to 499, 21 cents; 500 to 999, 20 cents; 1,000 to 2,499, 18 cents; 2,500 to 4,999, 17 cents. There is a minimum of ten copies per order.

### Marking Rules

The Proper Marking Association is making available a free marking rule card for shipping departments. The card outlines Marking Rule 6 of the Association of American Railroads and the American Trucking Association, along with export marking data, conversion equivalents and military marking specifications. Request Form MR-60 from the Proper Marking Association, Box 537, Carbondale, Ill.



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# Serving The Textile Industry

## Abington Textile Works Acquires Expandex Corp.

Abington Textile Machinery Works, North Abington, Mass., has announced the acquisition of Expandex Corp., Wauregan, Conn. The new corporation will be active in the field of expandable polystyrene, offering custom molding, product design services, standard equipment for molding, as well as completely engineered systems.

Abington, with 46 years of experience manufacturing vacuum card stripping systems and other specialized textile equipment, will continue to serve the textile industry.

## Columbia-Southern Made Division Of P. P. G.

Columbia-Southern Chemical Corp., formerly a wholly-owned subsidiary of the Pittsburgh Plate Glass Co., Pittsburgh, Pa., is now a division of the company. The new division will drop the Columbia-Southern name and operate simply as the chemical division of Pittsburgh Plate Glass. However, the division will continue to market its products under the Columbia-Southern name. It produces chlorine, caustic soda, soda ash, solvents, silica pigments, chrome chemicals, barium chemicals and other products. The purpose of the change in corporate structure was to consolidate the operations of Columbia-Southern with the parent concern.

## Addition Being Constructed At Durant Instrument Plant

Construction has begun on a 31,500-square-foot addition to the instrument division plant of Durant Mfg. Co., located at Watertown, Wisc. The Watertown plant, completed in 1957, contains 25,000 square feet, making a total of 56,500 square feet when the new addition is completed in July or August of 1961.

Featured in the new addition are air-conditioned areas for office and engineering personnel and an air-conditioned white room for precision instrument counter assembly work. A greatly expanded engineering test laboratory for electrical and environmental testing of the company's products is also planned.

Upon completion of the addition, Durant plans step-by-step transfer of all manufacturing, production control, engineering and related activities from its Milwaukee plant to the Watertown facility. The general administrative and sales department activities of the company will remain in Milwaukee. At some later date, these offices will be moved from the present building to another in the western section of Milwaukee.

## 1960 Was Record Year For The Trust Co. Of Georgia

A recent report by the Trust Co. of Georgia reveals that 1960 was a record year for the firm. Net income after taxes was \$2.7 million as compared with \$2.4 million for the previous year. Deposits of the Trust Co. at the end of the year totalled \$219.4 million as compared with \$208.5 million at the end of 1959. Total resources of the company and its six affiliated banks was \$399 million.

Charles E. Thwaite Jr., chairman of the board, said that most measures of business activity were at record levels but that enthusiasm was generally lacking. He suggested this might have been because a downtrend was evident and the outlook was never considered favorable.

## Sales And Earnings Down At A. E. Staley Mfg. Co.

The A. E. Staley Mfg. Co., Decatur, Ill., has reported a net profit of \$4.5 million on sales of \$155.7 million for the fiscal year ended September 30, 1960. This compares with earnings of \$5.7 million on sales of \$168.7 in the previous fiscal year.

## Aldan Rubber Is Licensed To Apply Syl-Mer Finish

Aldan Rubber Co., Philadelphia, Pa., has become a licensed Syl-Mer finisher, according to Dow Corning Corp., developer of the finish.

Aldan will apply the Syl-Mer silicone finish to both natural and synthetic coated fabrics for use in rainwear, thermal insulated clothing such as children's snowsuits and ski clothes, and other coated products where a high degree of repellency is required.

The rubber company, a specialist in fabric coating since 1909, is a producer of rubber, synthetic rubber and plastic coatings on all types of fabric tailored to exact specifications, for a wide range of products.

## Production Increase Of 25% Set By Batson For 1961

A program to increase its production capacity by 25% during 1961 is underway at Batson Mfg. Co., Greenville, S. C. According to Louis P. Batson Jr., president, the expansion program includes new manufacturing and finishing machinery, including a new boiler and dry kiln.

The company's enlarged coverage of textile market needs resulted in the expansion and addition of new facilities, Batson reports.

The Batson company manufactures picker sticks, jack sticks, loom signaling devices, loom lays, hand rails, revolving and flat clearers and has complete facilities for both turning operations as well as flat work.

## Monsanto Co. Acquiring Full Interest In Chemstrand

Monsanto Chemical Co., New York City, has announced plans to acquire the interest of American Viscose Corp. in The Chemstrand Corp. Chemstrand will become a wholly-owned subsidiary of Monsanto. Stockholder approval of the action was previously granted to Monsanto. American Viscose share-owners approved the acquisition on January 16.

Chemstrand, formed as a joint venture in 1949 by Monsanto and American Viscose, is the nation's second largest producer of nylon and acrylic fibers. The company operates three U. S. plants and has a wholly-owned subsidiary making Acrilan acrylic fiber in Northern Ireland. It also holds important minority interests in acrylic fiber-producing companies in Italy and Japan.

## National Vulcanized Fibre Acquires Fisher Mfg. Co.

National Vulcanized Fibre Co., Wilmington, Del., has announced the acquisition of Fisher Mfg. Co., Hartwell, Ga. Fisher is a supplier of metal, vulcanized





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## SERVING THE TEXTILE INDUSTRY—

fibre, fiber glass and fibre-armored materials handling receptacles for the Southern textile industry.

Details of the merger have been concluded. Terms for the purchase called for the exchange of 17,000 shares of National for 1,000 shares of Fisher stock.

Fisher's Hartwell plant, a one-story structure with 10,400 square feet of manufacturing space, is located approximately 50 miles southeast of Greenville, S. C.

No basic change in the sales policies of Fisher is contemplated. Outside the Southern textile market, Fisher metal, vulcanized fibre, fiber glass and fibre-armored receptacles will be handled by the parent company's national sales organization.

The Georgia firm is the second acquisition for National in the last two years. In 1959, National acquired the Parsons Paper Co., Holyoke, Mass., which functions as a division for the manufacture of high quality cotton fiber business papers.

Sales for National Vulcanized in 1960 are expected to approach the record

level of \$24 million reached in 1959, according to Eugene R. Perry, president.

"Earnings for 1960 will be lower than last year but should be slightly in excess of \$2 a share—considerably better than the \$1.85 average for the prior five years," reported Perry.

He said that his company should be producing at a volume of \$32 million in 1964 and earning at least \$3.25 per share on an increased number of shares. The firm does not anticipate additional capitalization but does expect to reduce current debt and maintain expenditures from depreciation and retained earnings.

## More Equipment Leasing By Textile Industry Reported

Long-term leasing of production and office equipment by textile firms spurred ahead during 1960, according to Robert Sheridan, president of Nationwide Leasing Co., Chicago, Ill. Sheridan cited four major reasons for the rapid growth of equipment leasing in the textile industry: first, increased popularity of sale-lease-back transactions involving existing plant; secondly, more equipment manufacturers have introduced lease plans for their products; thirdly, money remains tight; and finally, greater use of the open-end master lease under which companies can expand their leasing steadily as the need for additional equipment arises.

## Butterworth Produces 36,000th Pressed Roll

H. W. Butterworth & Sons Co., major producer of calender rolls, recently marked the production of its 36,000th pressed roll for the textile trade. Butterworth's roll-making experience dates back to 1885, according to Stanley Brooks, vice-president of Butterworth, now a division of Van Norman Industries Inc. The company combines the experience of Textile Finishing Machinery Co., Providence, R. I., which was purchased in 1944, and three other New England firms, Granger Foundry & Machine Co., Rusden Machine Co. and Phoenix Iron Foundry.

In the construction of Butterworth rolls, the cotton is first cleaned and combed. From sheets of cotton, circles or "doughnuts" are cut to fit the shaft. The "doughnuts" are slipped onto the shaft a few at a time. When a small amount of cotton has been fed onto the shaft, the roll is placed vertically into a frame and tremendous pressure is ap-

plied. The cotton is compressed for long periods, as much as 24 hours in some cases. This operation is repeated until the entire width of the roll is filled. The total length of time is up to 20-25 days.

In order to insure proper hardness and density, the company explained, only small amounts of cotton can be compressed at a time. The face of the filled roll is rough and uneven after the pressure has been applied. A special grinding machine is required to "sand" the cotton to kid-glove smoothness.

Butterworth uses a series of tests to insure perfect hardness. As many as 120 readings are taken on each roll in several of the tests in the series. The company uses a variety of materials to fill the rolls. Paper, felt, cotton and corn husks are used in the raw material. The most common fill is cotton.

## Sales For Chemical Industry To Be About \$28 Billion

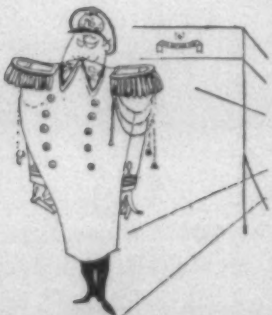
Sales of the chemical industry for 1960 are expected to hit \$28 billion or about 9% above the 1959 sales record of \$25.7 billion, according to John E. Hull, president of the Manufacturing Chemists' Association. In addition, Hull said, average of estimates made by industry leaders indicates that the year 1961 holds promise of total sales exceeding 1960.

"In looking over the decade of the '50s," Hull said, "it appears that if the next ten years of chemical industry development should be anything like the last ten, we are in for continued growth." Between 1950 and the end of the third quarter of 1960, chemical industry production on an index basis increased from 60.5 to 122 or more than 61%, and investment in new plant and equipment amounted to \$13.5 billion, he pointed out. This increased industry assets to more than \$24 billion. In addition, chemical industry sales of \$28 billion represent a 70.4% gain over 1950.

## Du Pont Dye Sales Office Being Moved To New Jersey

Du Pont Co. is transferring its New York district sales office, laboratory and warehouse to a new location in Clifton, N. J.

Du Pont has leased a building now under construction at 50 Page Road in Brighton Road Industrial Park. The one-story brick building will contain 6,800 square feet of office and laboratory space and 18,000 square feet for warehousing. About 35 employees will be involved in the move.



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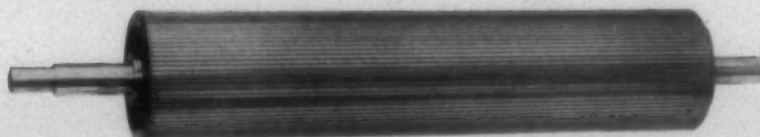
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## Spinners, Ginners, Breeders Review Spinning Test Results For The 1958-60 Cotton Crops

### EFFECTS OF EXTRA DRYING, LOW MOISTURE ON SHORT FIBERS AND ENDS-DOWN GIVEN AT COTTON CONFERENCE

**M**ORE than 600 spinners, ginners and breeders participated in the 1961 Beltwide Cotton Production-Mechanization Conference in Greenville, S. C., January 11-13. Sponsored by the National Cotton Council to acquaint the different segments of the cotton industry with the problems of the others, the meeting covered various topics, ranging from cotton quality and its effect on spinnability to pest controls and harvest aid guides. Papers of particular interest to spinners included those given by W. T. Pentzer, director of market research for A.M.S.-U.S.D.A.; John E. Ross, agricultural economist, A.M.S.-U.S.D.A.; George S. Buck, assistant to the executive vice-president of the council; and Fred B. Dent, president of Mayfair Mills, Arcadia, S. C. The following are abstracts of those papers.

### Progress Report On Research At Clemson Pilot Spinning Laboratory

By W. T. PENTZER

In a progress report on research at the Clemson (S. C.) pilot spinning laboratory for the U.S.D.A., W. T. Pentzer, director of the market quality research division, outlined the results of several tests that have been made on cotton. The first test considered was a 1958 California test on the effects of over-heating and over-machining of the cotton fiber and the effects that this had on spinnability.

A total of 16 bales were used with four replications. Extra drying, using outlet temperatures of 201° F. and inlet temperatures of 260 to 270° F., resulted in 8.1% short fibers as compared with 7.1% in cotton dried with ambient air of 26% r.h. and 95° F. Normal drying, 180° F. outlet and 230° F. inlet, had 7.5% short fibers. The extra drying before ginning resulted in yarn of lower break-factor than normal or ambient air drying.

In spinning this cotton, ends-down averaged 42 per 1,000 spindle hours (e.d.p.t.s.h.) This is compared with 30 and 31 in the cottons not subjected to such drying. The conclusions from this test were that low temperature drying or no heat at all is better than extra drying, and lint cleaning had little effect on fiber properties and spinning performance.

### 1958 Robinsonville Tests

The results of the 1958 Robinsonville, Miss., studies were discussed next by Pentzer. This was a ginning-spinning study made in co-operation with the Stoneville, Miss., ginning laboratory. It consisted of 42 bales of cotton—36 machine-picked and six hand-picked with three-bale replications in each category.

The 36 bales were ginned under 12 gin conditions representing elaborate and moderate overhead cleaning, high and low moisture and none, one and two lint cleaners. The six bales were ginned under two extreme conditions: (1) low moisture, elaborate overhead and two lint cleaners and (2) high moisture, moderate overhead and no lint cleaners.

Ends-down for the 40s yarn made ranged from a low of 26 e.d.p.t.s.h. in both the hand-picked lots to as high as 71 average in one of the high moisture machine-picked lots. The spinning performance of the cotton was significantly better in the low moisture lots (2.0 to 3.0% at the lint slide) than in the high moisture lots (5.0 to 9.0%). The only lot with high moisture that spun well was the hand-picked one. The percentage of short fibers was greater in the cotton exposed to the higher temperatures. This was true of both tested groups.

For some unexplained reason, spinning performance was better in the cotton exposed to more drying having 10.3 to 12.6% short fibers than in the cotton having only 8.5 to 10.3% short fibers. Weaving of this test will be undertaken this year by Clemson, said Pentzer.

The results of the 1958 Stoneville studies showed the expected trend in that ends-down increased with greater severity of gin treatment, Pentzer pointed out. Of the six lots with the highest ends-down, ranging from 48 to 83 per 1,000 hours, four were low in moisture (2.4, 2.7, 2.9 and 3.8%). A range of 16 to 35 e.d.p.t.s.h. was obtained with five high moisture lots (6.5 to 7.2%). The percentage of short fibers was generally better in the lots with good spinnability and poorer in the other lots.

### 1960 Crop Studies

Pentzer reported that the largest study undertaken in 1960 was with New Mexico cotton to determine the effect of two

levels of drying and three levels of cleaning on cotton that was harvested at three stages of maturity. There were approximately 60 bales involved in this study. As yet, the U.S.D.A. has not decided what spinning procedures it will use but tentative plans call for combing instead of carding, spinning 40s and 50s and carrying the studies through weaving, according to Pentzer.

A second study to determine the effect that defoliants and insecticides have on spinnability of the cotton fiber will be carried out, too. The third test originated at the Clemson laboratory for 1960 cotton was to find if cotton harvested at three levels of moisture—6, 8, and 10% brought to 6% moisture at the gin, using three different drying temperatures, 140, 187 and 234° F.—suffered any damage to quality as judged by spinning and measurable properties.

## Effects Of Harvesting-Ginning Practices On Fiber Quality, Mill Performance And Product Quality

By JOHN E. ROSS And S. T. BURLEY JR.

Another member of the U.S.D.A., John E. Ross, discussed the results of these tests in a paper that was written by him and S. T. Burley. He pointed out that the first study processed at the Clemson (S. C.) laboratory was to determine the effect of normal drying, no drying and excessive drying, with two conditions of lint cleaning on the Western cotton.

Ross stated that the effect of these treatments on most of the fiber properties was insignificant at the 5% level. Only fibers shorter than one-half inch and the coefficient of variation measured on the Suter-Webb Sorter were affected by excessive drying when compared with the other test conditions.

Under normal drying conditions, the yarn break factor was sharply reduced by the use of two lint cleaners (one of which was the saw tooth type). Excessive drying caused a highly significant decrease in this measurement when compared with other drying conditions, with or without lint cleaners, he added.

Further indications of the studies were that there was no difference in spinning performance for any of the four conditions tried except where excessive drying was used. These results correlated very closely with the short fiber content for these cottons. The yarn break factor was more sensitive to the application of lint cleaning, reported the agricultural economist.

Under ideal conditions of harvest, a grade of Middling was obtained from normal drying and no lint cleaners. Grades of Middling Plus were obtained from the other tests. Excessive drying did not produce higher grades and it appeared that the use of lint cleaners added the half grade benefit. Even when no drying was used, the application of lint cleaners produced equivalent grades.

However, with present premiums and discounts, it is questionable if a half-grade increase in the Middling range would result in a net increase in value to the producer, said Ross. With a premium of 35 points for Middling Plus as compared to Middling, a producer would lose from 20 to 50 cents per bale because of weight loss. If excessive drying were added, these figures would be increased by an additional \$1.00 per bale.

## Effects Of Ambient Air

The most important thing in this study, according to Ross, was the rediscovering of a principle that may have been overlooked in recent years. This is in reference to the use of ambient air at 90 to 100° F. with a low relative humidity; the use of artificial heat to dry cotton; and their effects on fiber properties and spinning performance. With an outside temperature of 95° F. and relative humidity of 26%, the original moisture of lint in seed cotton was reduced from 6.4 to 3.8%, he pointed out. This compared with the use of one dryer with inlet and outlet temperatures of 230 to 182° F., respectively, on cotton to reduce moisture content to 3.4% from an original content of 5.9%. The testers considered this to be normal, according to the report. Approximately 41% of the original moisture was removed in both instances.

In the case of the ambient drying condition, the original 95° air was raised to 113° because of friction and temperature rise across the fan. It resulted in a decrease of r.h. from 26 to 15%. The equilibrium moisture content of lint cotton in 15% r.h. is in the area of 3%. From this can be seen the tremendous drying effect that has been produced.

In discussing the 1959 tests, Ross pointed out several factors including the fact that this same situation occurred on another test in the same area. He said that it became necessary to cut off all artificial drying on machine-picked cotton having an original moisture content of approximately 9% to achieve a final level of 5%. Ambient air conditions were in the same areas as those described for 1958. In this particular 1959 test, a grade level of Middling was attained whenever two lint cleaners were used, regardless of whether drying was at the level of 5, 4 or 3%. Or whether elaborate or moderate overhead seed cotton was used in combination with any of these drying conditions.

## No Significant Differences

The economist pointed out that since the advent of mechanization, it has been accepted that there are no significant differences in hand and machine-picked cotton properties. These results have been presented in various papers giving research results over the last 15 years, he said. In 1958 the pilot plant working committee at Clemson directed that, when possible, the studies should include hand-picked lots to be used as a basis for comparison with machine-picked cotton. In addition these lots were to provide a basis for what might be termed the maximum in quality which was initially present.

Two tests that contained such cotton were conducted that year. Each one contained a lot with three replications of hand-picked cotton which received the minimum of gin treatment, while another identical lot received the maximum in cleaning and drying treatment.

Ross gave the results of one of those tests. (1) E.d.p.t.s.h. on hand-picked cotton, with minimum treatment, was 17. (2) A range of 38 to 47 e.d.p.t.s.h. was obtained where overhead and lint cleaners were varied but where lint moisture of about 7% was comparable to that for the hand-picked lot. (3) When moisture in machine-picked cotton was reduced below that generally recommended (down to 4 and 2.8%), the difference became slightly greater.

(4) When hand-picked cotton received maximum cleaning at a low moisture level of about 2.3%, e.d.p.t.s.h. amounted to 38. (5) The hand-picked cotton, ginned at a high moisture level, had slightly more short fibers in the ginned lint than did machine-picked. (6) A measure of the short fiber content



of the card sliver from the two harvesting methods contained almost 2% less short fiber than did the machine-picked cotton.

Ross reported that other tests involving the two types of harvesting are being conducted to determine whether these differences can be substantiated. And to develop possible leads which may indicate the reasons for these differences if they actually exist.

### Results Of 1958 Tests

The results of another 1958 test involving a complete analysis of the effect of drying and cleaning practices on machine-harvested cotton were outlined in the paper. It was found that on 40s yarn, the ends-down level for hand-picked cotton was 26, compared with 52 for machine-picked stock. Both types were ginned at a moisture level of slightly above 6% with moderate overhead seed cotton cleaning and lint cleaning. When maximum cleaning and drying were used in the study, the ends-down level for machine cotton was reduced to 36, while that for the hand cotton remained at 26.

This test showed that there was a complete reversal of the effect of drying on ends-down. Normally it could be expected that in a research project there would be some reversals in some of the treatments. This occurrence was completely the reverse, said Ross. As more drying was applied (moisture level about 2.5% compared with approximately 6% for the high moisture cotton), the ends-down level was lower. This occurred in spite of the fact that short fibers increased and the yarn break factor decreased.

Continuing to give observations on this test, Ross pointed out that it appeared significant that the hand-picked cotton which was treated in a minimum manner had the same ends-down it did when excessively dried and cleaned. He stated that it was known that this cotton had received two applications of insecticides after the cotton was opened. Lint samples were checked to determine if oil were present which had affected some tests in the past. These results were negative. Research contracts have been let to determine whether there was some surface property of the cotton that was affected by the use of such chemicals. That might explain the reversal.

It appeared that some contaminant caused more damage to spinning performance than did excessive heat, and that this heat had driven off the contaminant. This would indicate better spinning performance for the excessively dried cotton. It could be that other factors could be involved, stated Ross. Only more intensive research efforts will uncover and assign proper relationships to them.

### Summary

After reviewing the foregoing tests and studies, Ross made the following observations:

(1) Many elements that affect cotton quality may not be indicated by grade.

(2) There is partial evidence that in some cases, abuses in ginning may not be the sole reason for bad spinning performance.

(3) It also appears that the problems involved in mechanization may be much more complex and difficult of solution.

(4) It is evident that the use of grade and some of the more common fiber property measurements do not tell us specifically how any cotton will perform in the mill.

(5) It is important to know just what is involved in cotton quality. Spinning procedures can be geared to measure cotton quality in such a way that no difference between any specified

treatments occur. For instance, spindle speeds, the amount of twist applied in spinning and the size of yarn spun can all affect the results.

(6) The mill and the consumer must be willing to pay for those qualities that are inherent in cotton and are constantly being improved, if advantage is to be taken of technological progress and increased demand for fiber.

The important thing is that both the producer and the consumer understand the problems, capacities, potentials and competitive nature of the other segments in arriving at a quality-price mechanism that will assure the expansion of the entire cotton industry, said Ross.

## Cotton Quality In Perspective

By GEORGE S. BUCK JR.

George Buck defined the cotton quality problem as one of obtaining quality regardless of the manner in which it is harvested, ginned or spun. The cotton industry's problem, when viewed from the proper perspective, is the true identification of the cotton problem, he stated.

Buck discussed property measurements used to determine good cotton. These are fineness, length and length distribu-



**1961 MAID OF COTTON**—Linda Joy Lackey, a dark-haired blue-eyed beauty from Forest, Miss., is the 1961 Maid of Cotton. The 19-year-old speech major from the University of Mississippi won out over 20 other candidates in the annual competition December 28-29 at Memphis. Her first jaunt as the new titleist was to New York City where she was outfitted in a 43-piece, all-cotton wardrobe styled by leading American designers. Her itinerary in the months ahead includes 30 major U. S. and Canadian cities, Hawaii and Europe. Sponsors of the contest—the National Cotton Council, the Memphis Cotton Carnival Association and the Cotton Exchanges of Memphis, New York and New Orleans—limit their statistical description of Miss Lackey to height and weight, 5-6  $\frac{1}{4}$ , 124.





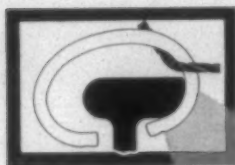
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tion, strength, trash content and character and quality "X."

He pointed out:

(1) That although the biggest part of the job has been done, fineness tests and results can be greatly improved. Mills that at first went overboard in avoiding fine cottons have now learned to properly blend their stock.

(2) Length and length distribution are not the final and exclusive answer to quality, but are very important. Research points to the ultimate availability of a test which can be applied to every bale of cotton. When mills have this test, and learn to evaluate it, another step will have been taken towards solving the quality problem.

(3) Strength testing methods are not rapid enough to be applied to each bale of cotton. These methods should be improved for dependability and accuracy. Automatic strength measuring methods, rapid enough to be applied to each bale, may be available in the near future.

(4) Trash content and character cannot be determined satisfactorily by visual means. They do not provide substantial information and are not dependable. Scanning methods may eventually give enough data about both of these characteristics of cotton. However, it may prove necessary to remove the trash from the cotton, not only to measure the content but also the ease of removability.

(5) The fifth property is defined as quality "X." It cannot be described by any measurement or group of measurements at present. The factors of color, neps and surface friction must be taken into consideration for this property. Some progress has been made towards tying these factors together.

Buck summed up his talk by saying that understanding cotton is still the main problem facing the cotton industry today.

## **Cotton Quality Elements Needed By Mills**

By **FRED B. DENT**

The "quality elements of a fiber" mean spinnability to mill men, according to Fred B. Dent. He listed four of these as staple length, fineness, strength and contaminating sprays. In describing them, Dent said: first, the cotton must be adequate in length and length distribution. Staple length determines the size yarn and yarn strength that a mill can produce. Prior to the mechanization of harvesting and ginning, "classer's call" of the staple length was the controlling factor in selecting cottons. Mills have now found that two other measures made by machine are also useful and important in classing cottons according to length. These are the Upper-Half Mean and the percentage of short fibers that are one-half inch and shorter. These two methods can also indicate which gins are over-heating or over-machining their stock, said Dent.

The second element to be considered is fineness as determined by the Micronaire. Uncontrolled Micronaire cotton in a mill can cause poor quality work and inefficient, costly operations, because control of neps and the uniformity of yarn strength are seriously affected by the Micronaire of the cotton. Fineness controls to a large degree the affinity that a fiber will have for dyes.

Strength is the third category for quality elements. Mills seek this characteristic in cotton because today's chemical fin-

(Continued on Page 64)

# Topics On Slashing And Weaving Featured At Eastern Carolina Meeting Of The S.T.A.

SUBJECTS INCLUDE: (1) STUCK ENDS ON BEAM WARPS; (2) TRACING BAD WORK; (3) WEAVE ROOM QUALITY

One of the features of the Fall meeting of the Eastern Carolina Division of the Southern Textile Association was a group discussion on slashing and weaving topics. Here are some highlights from that forum, which was headed by Malcolm Blackman and Chester L. Taylor, both of Erwin Mills at Erwin, N. C.



T. B. Stevens  
of Erwin Mills,  
Erwin, N. C.,  
is chairman of the  
Eastern Carolina Division  
of the S.T.A.

## Slashing

*Moderator:* What percentage of moisture are you leaving in your warps?

*Mill A:* We are leaving 7% in our sheeting yarns.

*Moderator:* Anybody else like to comment on that?

*Mill A:* I'd like to say that whenever you're dealing with beam warps, you can prevent many breakouts by having good beaming. You'll probably have breakouts on the slasher anyway. Patrolling is good as a preventative measure, but if you can't find the defects before they reach the slasher, you'll defeat your purpose.

*Moderator:* You mean that the defects must be stopped in your beaming operation, don't you?

*Mill A:* Yes, and also in the warping room.

*Moderator:* How many of you have beam warps? What have you done about your stuck ends?

*Mill A:* We run leases on them about every 5,000 to 6,000 yards.

*Moderator:* You lease them before every doff?

*Mill A:* Yes.

*Moderator:* When you find a bad place on a warp, what do you do about it then?

*Mill A:* If there are as many as four ends stuck to cause a breakout, then the slasher tender will have that beam doffed.

*Mill B:* We don't consider anything under four ends a breakout.

*Moderator:* Does anyone have any idea how many pieces they are doffing?

*Mill A:* We don't have an excessive number of pieces in our weave room.

*Mill B:* We average one piece for every set that we run out of approximately 19,500 yards, excluding normal runout pieces.

*Moderator:* We want to keep this bad work out of the weave room, and it's a problem to decide which warps to let go and which ones to doff. Do you have any system of checking these warps in the weave room and keeping the slasher room posted on them?

*Mill A:* I'd like to make a comment on that. We have a

crossed end-lap report that is taken on a weekly basis. It consists of the total number of laps and crossed ends in the weave room. It's designed to give us some idea of the shape that our warps are in when we get them from the slasher room.

*Moderator:* How do you get this report? How often is it made?

*Mill A:* We make the report once a week. The supervisor, weaver or a person from our quality control department makes out the report.

*Moderator:* Do you go ahead and fill up the beam and expect to tie it in the weave room?

*Mill A:* No, we doff the beam, pull it off and send it out to the weave room.

*Mill B:* Wouldn't it be just as easy to fill the beam up, and when the bad place came up, to retie it in the weave room?

*Mill C:* That's what we do in our mill. We fill it up and retie it in the weave room later.

*Mill D:* It's going to have to be retied anyway, whether you doff it and send two beams out or send the full beam out.

*Mill E:* You're right, but by tying it on the loom you'll save on your warping time.

## Tracing Bad Work

*Moderator:* What kind of checks do you have for tracing bad work through your different operations?

*Mill A:* We have beam tickets that show who ran the beam.

*Mill B:* In beaming, do the beamers mark the yardage on the ticket to show the slasher tender where an end has broken? We feel that we can anticipate trouble, if we know approximately where it is on the beam. If we don't know where these ends are, then we'll be looking for trouble that usually shows up after it's too late to help.

*Mill C:* Sometimes the trouble is caused by getting slubby yarn from the spinning room. These slubs catch in the drop wires and can cause a breakout before we can stop the machine.

*Moderator:* The way we handle it is to inspect each set very carefully while it is running out. Any defect that shows up is reported on the back of the ticket by the supervisor. If it is something that he should talk to the beamer about, he's called over and shown his bad work. Everything is recorded and a running record is kept on each warp. We may not do



anything about a man's first defect, but if he's out of line with the rest of the employees over a period of time, then a little more time is spent with him to find the reasons for it.

*Mill A:* We keep a running report all of the time.

*Moderator:* Does it show what that particular warp mill has been doing for the past several weeks?

*Mill A:* It's a complete record.

### How Do You Split Wet Warps?

*Mill A:* How do you split wet warps?

*Mill B:* We split them after they come out of the dyehouse.

*Mill A:* What speeds do you split them at?

*Mill B:* We run them at about 45 yards a minute.

*Mill A:* Would it be practical to split them at high speeds?

*Mill B:* It has been done at high speeds, but you have a little more trouble at high speeds than at normal. The best speeds are about 50 to 60 yards.

*Moderator:* Does anyone have an idea or arrangement that can be used to get an end and end lease on each warp coming off the slasher?

*Mill A:* It will cost you money, but you can do it.

*Moderator:* I know it's being done on synthetics, but I want to know about coarse cotton counts.

*Mill B:* Sure, it can be done, but the question is, is it practical?

*Moderator:* You can put a hooked comb in back between your creel and your size box, but you have so much chafing that you wear your yarn out and tear the reed up also. There is a machine on the market now that is capable of tying an end and end lease, but we haven't been able to get this lease.

*Mill C:* It might be more economical to get a lease picker.

You can pick the lease on the warp after it comes off the slasher, which would mean an extra operation.

*Moderator:* We've spent a lot of time on the problem, and we've had a lot of help on it, but we haven't come up with anything yet.

*Mill D:* Did I understand that this machine had to have an end and end lease?

*Moderator:* No. I said that it can tie one. It's capable of tying an end and end lease, which would give you a perfectly straight warp. It's no problem to get this lease from the pattern on the loom, because you're still tying a flat sheet. Are there any more questions before we move into the weave room?

## Weaving

### Biggest Problem: Quality

*Moderator:* I think the biggest problem in the weave room is quality. What type program do you have to report the weave room defects from the cloth room back to the weave room? How often are they reported? What type of report do you have?

*Mill A:* We receive a report back from the cloth room, a slip of paper, that has the style, pattern, defects and the number of yards that were run on each shift. Our cloth room only runs two shifts, while the weave room runs three. These slips are given to the supervisors as a guide to check the loom and then passed on to the next shift. After all three supervisors have checked the loom, then the report is turned in to the overseer.

*Moderator:* Does each cut of cloth have a ticket?

*Mill A:* We don't get a report unless the loom is making seconds.

*Moderator:* Do you feel that these reports reach you in time to stop the loom from making further seconds?

*Mill A:* Our reports are sent down on the average of 2 1/2 times a shift.

*Moderator:* Do any of the rest of you have any problems along this line?

*Mill B:* We have a system in our mills similar to the one just mentioned. We definitely get a report for all major defects from the cloth room every two hours. This record is passed directly to the weave room supervision, and they give out loom priority as soon as they get the report from the cloth room. This means that every major defect is reported to us every two hours. Also we use the same system that was described by this other mill.

*Moderator:* Do you feel that yours are reported on time? Do you have any backlog that would keep your looms from being reported earlier?

*Mill B:* No. I think that it has worked out very well so far. The cloth room has a man delegated to do this particular job. We call it our "Red Tag" system.

*Moderator:* That's just for your major defects. What about your regular seconds reports?

*Mill B:* They are similar to the system previously mentioned.

*Moderator:* You have a system to keep up with your looms repeating, haven't you?

*Mill B:* That's right. We get a ticket with all of the defects in a cut of cloth, but this is not as prompt as for the major defects.

*Mill C:* We have that system too. The shift supervisor gets the report, carries it to the loom, inspects the cloth on the

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loom and makes sure that the fixer fixes that particular loom before anything else. After the fixer is through, the loom is flagged for the supervisor. He takes that roll of cloth to the cloth room and has it inspected. If the loom is making the same defect or another kind of defect, then the card is sent back to the weave room as a repeat.

*Mill D:* Our inspection tables are in our weave room, although they are still under the supervision of the finishing department. We doff the cloth and take it directly to the tables for inspection. After the inspection, the inspector writes out a ticket and gives it to the overseer. We also have a book to record these defects in weekly. The book has a page for every loom in the weave room, and the defects are kept in there. This book is also used as a record for disciplinary action where it is required. When the next roll comes off and is inspected, we can tell whether it has been corrected or not. We get a ticket back and check the loom like the others do. If we find something wrong with a piece of cloth, we take the weaver right to the inspection table.

*Moderator:* Do you inspect all of your cloth in the weave room? Are all your tables there?

*Mill D:* Yes they are.

*Mill E:* From our weekly record book, we try to consolidate our reports each week, and have what we call a quality book instead of one report coming through and then another. We put them out all in a lump. The overseer gets all of these reports—percent seconds, styles, patterns, yardage, and the weaver's name. There are a lot of data in there that we think are pertinent, and we put it out in a lump sum weekly. The only purpose for these reports is for correction, and we feel that it is better to get this once a week.

### Beware Of Too Many Reports

*Moderator:* It isn't hard to get into this thing of over reporting. You can have too many reports, and when you get your desk full of them, you sometimes aren't able to look at any of them. If you have a few good reports, really follow up on them and do something about them, you're much better off than if you send out reports on everything in the world.

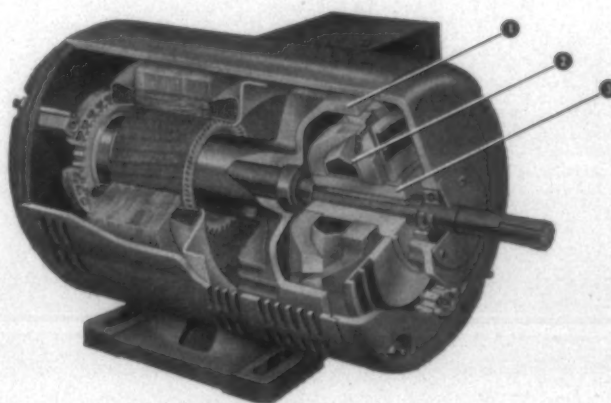
I don't think that we have done any over reporting from the standpoint of quality. We have a board right in the middle of our weave rooms where each ticket is taken when a defect is reported on a loom. The tickets are recorded on the board with different colored pencils, to indicate what shift made the second. The supervisor carries that ticket to the loom, and follows up with the weave room fixer on it. The board is there to tell everybody which looms are making the seconds, which looms are repeating and whether we were getting anything done about it or not. A loom in any particular place that is not getting any follow-up on it and is not being fixed will stand out on the board.

Each supervisor is responsible for his section, and one of his duties in the day is to find out what is on that board. If he has a loom on the board, whether it is a first time loom or a repeater, he's responsible for checking that loom to see that it doesn't repeat again. He will check the board several times a day because the defects are continually marked on it. It's very easy for the overseer, superintendent or anyone else to see where the seconds are coming from.

*Mill F:* We have a board similar to yours, but ours is marked by fixer sections and is divided into thirds. This shows not only which looms are making seconds, but also which fixer on that section is responsible for the most seconds.

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# Principles Of Fabric Designing

## THE FABRIC DESIGNER MUST THINK IN TERMS OF DESIGN, FABRIC CONSTRUCTION AND COST

By E. B BERRY\*

**I**DEAS for designs in textile fabrics come from many sources. Geometry is a frequent contributor with its squares, circles, triangles, ovals and oblongs. Nature gives us much in the way of flowers, leaves, trees and animals.

Copying or modifying another design is a rather common practice, for as King Solomon has said, "There is nothing new under the sun." Very rarely do we come up with something that is really new, but rather our designs are revisions and adaptations of existing patterns.

A customer who buys Tissue Gingham may see a piece of striped wallpaper that catches his eye. He can visualize this pattern in a fabric in a given price range and he calculates it will appeal to the class of people who are willing to pay "X" dollars for such a dress or blouse.

His one interest is to get this new effect in cloth, so he takes the wallpaper to the textile salesman and asks to have a sample made, since he has confidence in his ability to pick a seller.

### The Problem

This presents a problem to the textile designer. How well does the wallpaper pattern fit into any given fabric construction? To be the same size as the model, the cloth pattern may have an odd number of picks per pattern, which would mean a part of a dent in the warp and a pick and pick loom for the filling thereby pricing itself out of the market.

This article deals with the technique of working out a practical loom set-up from such a wallpaper design.

### Construction Of Pattern

A textile designer is given a piece of wallpaper with a color layout as shown in Fig. 2. This is to be woven in a Tissue Gingham fabric, 108 ends x 92 picks, with the same pattern filling-wise as in the warp. The first step is to measure a repeat, and then be sure the sum of all the individual color stripes total the overall dimension.

An easy way to work this out is in the form of a chart as shown in Fig. 1. Column 1 shows the color of the stripes, and will list each color in sequence, for the entire repeat. The width of stripe is in Column 2. This is measured from the original sample.

The third column is dents per inch in the cloth. Obviously, this will vary with the construction of the fabric. This Tissue Gingham is plain weave, with 80/1 warp yarn. The calculation will be  $108 = 54$  dents per inch in the cloth. An alter-

nate would be  $\frac{108}{2} = 36$ , but 3 ends per dent is not the best way to reed a plain weave fabric. Another way would be  $\frac{108}{3}$

\*Mr. Berry is Assistant Professor in the Department of Fabric Development at North Carolina State College School of Textiles.

$\frac{108}{4} = 27$ . This reed is too coarse, and reed marks would

show up in the cloth. Thus the 54 dents with 2 ends per dent is used.

Column 4 (calculated dents per stripe) is simply the product of Column 2 x Column 3. This comes out in decimals and is the number of dents needed with the reeding of 2 per dent, to produce the desired width of stripe from the original pattern. Adjustments must be made since it is impossible to put in the cloth .78 dents. In this case, with a reeding of 2 per dent, it would be possible to use .5 dent which would be one end. However, this would put 2 colors in a dent, which, while possible, will present problems in drawing-in, weaving and repairing smashes.

### Caution

Care must be exercised in making the adjustment from Column 4 to Column 5. If each individual line is increased the pattern in the cloth will be larger than the original pattern, and if each line is decreased, the pattern in the cloth will be too small. In either case it may not be acceptable to the customer. Some colors, therefore, may be increased while others are decreased. If the same color appears twice in the pattern, and has the same width in each position, the adjustment of each should be in the same direction, to keep the stripes uniform. The Grey stripes in Fig. 1 are .80". These should be kept the same (43 dents) in Column 5. The Red is .78" or a little smaller than the Grey .80". The Red, therefore, should be reduced to 42 dents.

Column 6 is the ends per dent. In this case there are 2, which has already been determined in arriving at the number 54 in Column 3.

Ends per stripe, Column 7, is merely the product of Column 5 x Column 6. This is the exact number of ends that will appear in the cloth.

### Determining Accuracy

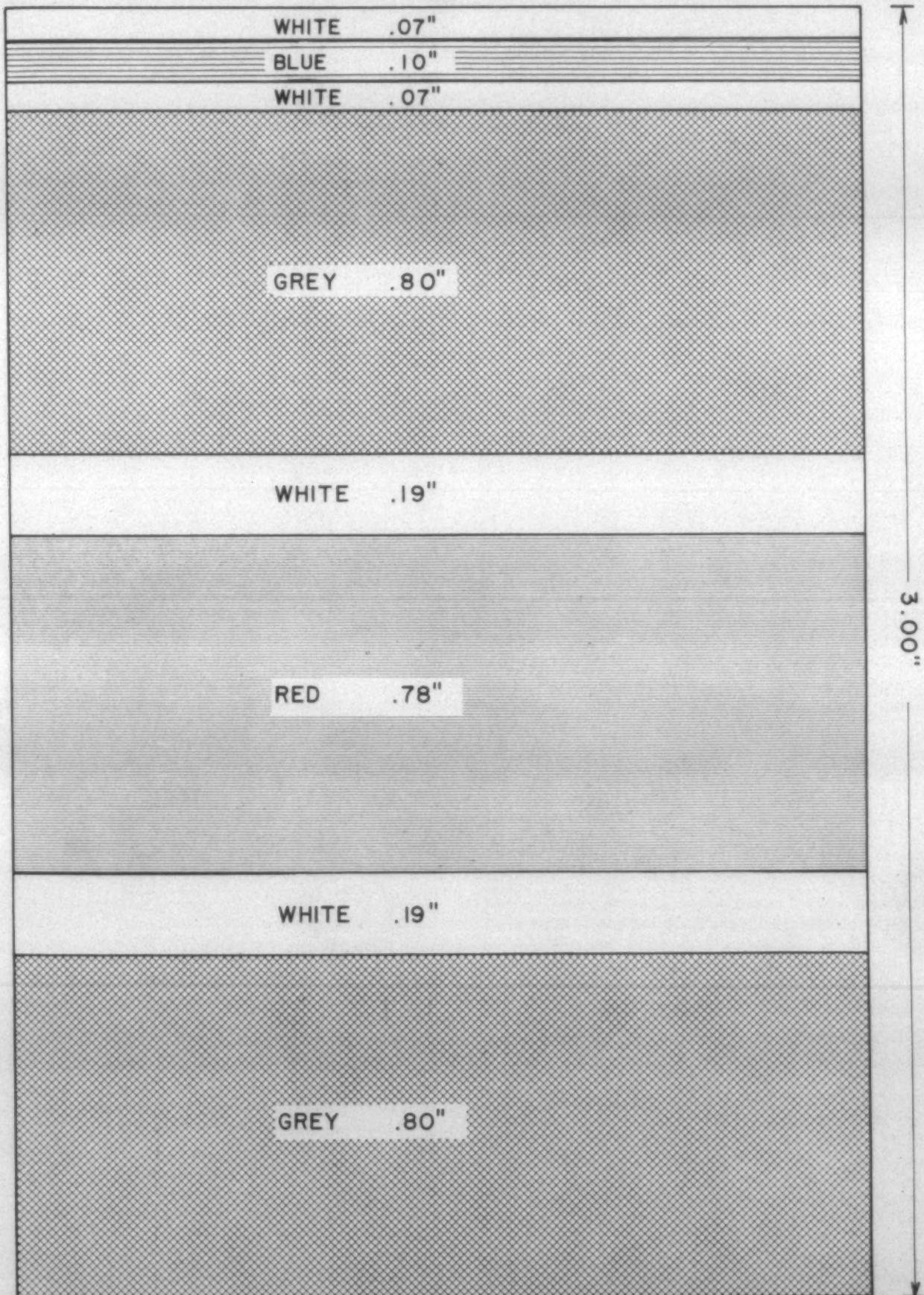
In order to determine the accuracy of these figures, the

Fig. 1

| 1               | 2               | 3                       | 4                           | 5                     | 6             | 7               |
|-----------------|-----------------|-------------------------|-----------------------------|-----------------------|---------------|-----------------|
| Color of Stripe | Width of Stripe | Dents per inch in Cloth | Calculated Dents per Stripe | Used Dents per Stripe | Ends per Dent | Ends per Stripe |
| White           | .07"            | 54                      | 3.78                        | 4                     | 2             | 8               |
| Blue            | .10"            | 54                      | 5.40                        | 6                     | 2             | 12              |
| White           | .07"            | 54                      | 3.78                        | 4                     | 2             | 8               |
| Grey            | .80"            | 54                      | 43.20                       | 43                    | 2             | 86              |
| White           | .19"            | 54                      | 10.26                       | 10                    | 2             | 20              |
| Red             | .78"            | 54                      | 42.12                       | 42                    | 2             | 84              |
| White           | .19"            | 54                      | 10.26                       | 10                    | 2             | 20              |
| Grey            | .80"            | 54                      | 43.20                       | 43                    | 2             | 86              |
|                 | 3.00"           |                         | 162.00                      | 162                   |               | 324             |



Fig. 2



This is the color layout of the wallpaper given to the textile designer to be the basis for a design to be woven into a Tissue Gingham.



width of the stripe in the cloth should be very close to the width of the stripe from the original wallpaper design. The sum of Column 2 is 3.00". The sum of Column 7 is 324 ends, and with a sley of 108, the figures show  $324 = 3.00''$

108

which is correct. Another way would be to use Column 3 and Column 5. The sum of Column 5 is 162 and with 54 dents per inch in the cloth, the figures show  $162 = 3.00''$ , the same

54

as before.

It may not always be possible to have the cloth come out so close. Adjustments should be made if the fabric repeat is  $\pm 3\%$  from the original. In cases of a very coarse reed (20 to 25 dents per inch) this may be rather difficult.

### Filling Pattern

The original sketch (Fig. 2) shows lengthwise stripes only. This would be in the warp direction in a fabric, but the customer wants the Tissue Gingham to have the same pattern in the filling too.

A good rule of thumb is to have the filling pattern approximately 10% longer than the warp pattern is wide to allow for warp contraction. This would be 3.00" warp width x 3.00" filling length.

In order to determine the picks per color stripe, a chart may be made up as seen in Fig. 3. Column 1 shows the color of the stripe, and will list each color in sequence, for the entire repeat, the same as it is in the warp. The width of stripe in Column 2 is the warp width x 10%. Column 3 is 92 which is the picks per inch in the fabric that the customer wants. The calculated picks per stripe, Column 4, is determined as follows:

There are 92 picks per inch and 108 ends per inch in this Tissue Gingham so,  $92 = .8519$ . This is the ratio of picks

108

to ends, or one end will occupy the space of .8519 picks. The filling pattern though is to be 10% greater in length than the warp, so multiply the .8519 x 1.10 or .9371.

The number of ends of each color in the warp pattern (Column 7, Fig. 1) is multiplied by .9371 to arrive at the calculated picks per stripe. The first one (Column 4, Fig. 3) white, is  $8 \times .9371 = 7.50$ .

Column 5 takes some juggling. It is not possible to have a part of a pick in the pattern, and in addition, merely a whole number if it is odd, would require a pick and pick loom. In a fabric such as the Tissue Gingham, the price would not allow such expensive weaving.

If all the individual lines are increased, the pattern will be

Fig. 3

| 1               | 2               | 3              | 4                           | 5                     |
|-----------------|-----------------|----------------|-----------------------------|-----------------------|
| Color of Stripe | Width of Stripe | Picks per inch | Calculated Picks per Stripe | Used Picks per Stripe |
| White           | .08"            | 92             | 7.50                        | 8                     |
| Blue            | .11"            | 92             | 11.25                       | 12                    |
| White           | .08"            | 92             | 7.50                        | 8                     |
| Grey            | .88"            | 92             | 80.59                       | 80                    |
| White           | .21"            | 92             | 18.74                       | 18                    |
| Red             | .86"            | 92             | 78.72                       | 78                    |
| White           | .21"            | 92             | 18.74                       | 18                    |
| Grey            | .88"            | 92             | 80.59                       | 80                    |
|                 | 3.31"           |                |                             | 302                   |

too long; if they all are decreased, the pattern will be too short. If the same color appears twice in the pattern with the same size stripe, the adjustment should be in the same direction to make sure the cloth will be correct.

A good check on the accuracy of these figures is to add up the figures in Column 5. In this case, there are 302 picks per pattern. With 92 picks per inch, the repeat will be  $\frac{302}{92}$

3.28". A 10% increase over the warp pattern would be  $3'' \times 1.10 = 3.30''$ . This is very close and readily acceptable.

### Picks Per Inch Of Each Color

For costing purposes it is necessary to determine the picks per inch of each color. However, if a one-pick glass is put on this fabric, all the colors will not be included. If the pick glass straddles the Grey, there will be White on each side, but the Red and Blue will not be included. Likewise, if the pick glass is put on the Red, some White will be included, but the Grey and Blue will be omitted. So the picks per inch must be calculated.

Although there are 302 picks per pattern, the total picks per inch of all colors must add up to 92. The ratio of picks per inch to the total picks in the pattern is  $92 = .3046$ . Ex-

302

pressed another way, each pick in the total pattern is .3046 picks when considering picks per inch. This .3046 is then multiplied by each individual line in Column 5, Fig. 3.

|       |                    |
|-------|--------------------|
| White | .3046 x 8 = 2.44   |
| Blue  | .3046 x 12 = 3.66  |
| White | .3046 x 8 = 2.44   |
| Grey  | .3046 x 80 = 24.37 |
| White | .3046 x 18 = 5.48  |
| Red   | .3046 x 78 = 23.76 |
| White | .3046 x 18 = 5.48  |
| Grey  | .3046 x 80 = 24.37 |
|       | 92.00              |

Adding all the separate lines of the same color this comes to:

|                      |                      |
|----------------------|----------------------|
| Picks per inch White | 15.84                |
| Picks per inch Blue  | 3.66                 |
| Picks per inch Grey  | 48.74                |
| Picks per inch Red   | 23.76                |
|                      | 92.00 picks per inch |

### Filling Box Chain

One of the first items to consider in laying out any filling box chain is to have a smooth operation with no skipping or jumping of boxes. Another principle is to have the filling that is used most to be in the top box. Also, if one color is very hard to see, such as a black, have it in the top box.

All these ideal conditions are not always possible. From the above filling layout it is seen that White separates all the colors. This means that in whatever box the White is put, it will have to skip at least one box to bring up one of the other colors. For this reason, the White should not be put in the first or fourth box, as two boxes would then have to be skipped. White should be put in the second or third box.

Red and White appear only once in a repeat, while Grey appears twice. The most practical way would be to have Grey in the top box, White in the second, Blue in the third and Red in the fourth box. The box plan then would appear as in Fig. 4.

Fig. 4

## BOX PLAN

|            |       |   |    |    |    |
|------------|-------|---|----|----|----|
| First Box  | Grey  |   | 80 |    | 80 |
| Second Box | White | 8 | 8  | 18 | 18 |
| Third Box  | Blue  |   | 12 |    |    |
| Fourth Box | Red   |   |    | 78 |    |

## Use Of Multipliers

For such a long filling pattern, the use of multipliers is essential. Also two multipliers will aid in cutting down on the length of box chain. The box chain used is the conventional one as found on C&K C-4 looms. There are two positions for the multiplier,  $M_1$  and  $M_2$ .  $M_1$  is a series of low links with a high link to take it out.  $M_2$  is a series of high links, with a low link to take it out.

A spacer under position 3 will allow the first or top box to weave, while a roller under position 3 will bring up box No. 2. A roller under position 4 will bring up box No. 3, and a roller under positions 3 and 4 will bring up box No. 4.

For weaving this Tissue Gingham,  $M_1$  of 4 links (8 picks) and  $M_2$  of 9 links (18 picks) was selected. The reasoning is to use  $M_1$  to get the 8 picks of White,  $M_2$  to get the 18 picks of White, and the two together plus  $M_1$  by itself to get 80 picks of Grey. The box chain plan is shown in Fig. 5. It takes only 15 bars to get the 302 picks per filling repeat.

Fig. 5

## BOX CHAIN PLAN

| Color | Number of Bars | Total Picks | $M_1$ | $M_2$ | 3 | 4 |
|-------|----------------|-------------|-------|-------|---|---|
| White | 1              | 8           | X     |       | X |   |
| Blue  | 1              | 8           | X     |       |   | X |
| Blue  | 2              | 4           |       |       |   | X |
| White | 1              | 8           | X     |       | X |   |
| Grey  | 1              | 72          | X     | X     |   |   |
| Grey  | 1              | 8           | X     |       |   |   |
| White | 1              | 18          |       | X     | X |   |
| Red   | 1              | 72          | X     | X     | X | X |
| Red   | 3              | 6           |       |       | X | X |
| White | 1              | 18          |       | X     | X |   |
| Grey  | 1              | 72          | X     | X     |   |   |
| Grey  | 1              | 8           | X     |       |   |   |
|       | 15             | 302 picks   |       |       |   |   |

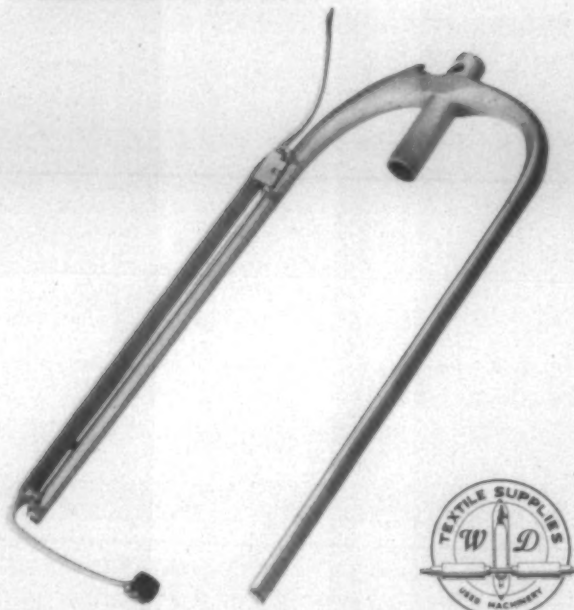
## P.T.I. Changes Name To Philadelphia College Of Textiles And Science

The name of the Philadelphia Textile Institute has been officially changed by authorization of the board of trustees to the Philadelphia College of Textiles and Science, according to Dr. Bertrand W. Hayward, president. The change of name for the college, which is located at School House Lane and Henry Ave., was made legal by court approval.

## December Textile Mill Failures Up As Compared With December 1959

In December some nine textile mill products manufacturing concerns failed with liabilities totalling \$723,000. This compares with eight firms with liabilities of \$1,012,000 that failed in December of 1959. In the year of 1960 some 72 textile manufacturers with liabilities of \$7.1 million failed, as compared with 69 with liabilities of \$7.3 million in 1959.

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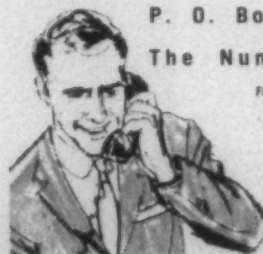
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# A.T.O.E. Discusses Spinning Frame Maintenance

## ALABAMA OPERATING EXECUTIVES DISCUSS SPINNING FRAME MAINTENANCE AND CLEANING AT THEIR FALL MEETING

**The Fall session of the Alabama Textile Operating Executives, held November 12 at Auburn University, featured discussions about spinning frame maintenance and cleaning. Here, in abstract form, are some of the topics discussed.**

### **Question No. 1—What is your method for cleaning steel rolls?**

*Mill A:* We use a crew of four to clean steel rolls. We clean the rolls every four months. They are laid out; cradles taken apart; chokes cleaned from under the aprons; rolls brushed and roll stands cleaned and oiled; and front and back top rolls buffed.

*Mill B:* We clean steel rollers every three months with wire brushes made from card clothing. Wooden stands are used to hold each side of the rollers. Each stand has notches for three rollers spaced far enough apart so they will not touch when the rolls are turned. We have two people in our roll cleaning crew. The routine of the work consists of: (1) the frame is stopped and the head-end is cleaned, oiled and gearing is removed; (2) the roving is twisted at the trumpet and laid back; (3) top rollers and steel rollers are removed; (4) aprons are removed by cutting the bad ones and leaving the good ones (good aprons are slid into appropriate place toward the head-end); (5) new aprons are put on; (6) rollers are wire brushed until they are clean; (7) rollers are replaced in the same position; (8) gears are replaced; (9) roving is laid across steel rollers; (10) top rollers are placed in position and fastened; (11) the frame is started, then stopped for piecing.

*Mill C:* Our three-man crew cleans steel rollers on a three-month cycle. First, steel rolls are taken out of the frame and put on racks. Then a steel wire brush which is driven by air pressure is used for scrubbing.

*Mill D:* We have a two-man crew cleaning steel rolls every 90 operating days. Cradles, rolls and aprons are dis-assembled, blown-off and scrubbed. Any worn parts or aprons are replaced. Ends-down collection flutes and suction boxes are cleaned. On reassembly, various parts are oiled and greased.

*Mill E:* We clean steel rolls with a wire brush. Rolls are lifted out of stands by three or four men to prevent bending and placed in brackets for cleaning. We have Roth long draft spinning and clean rollers at least each 18 months. The frame is lined and levelled and spindles are plumbed at the same time.

The sequence of our cleaning operation is: (1) prepare frame by removing clearers, rolls, etc.; (2) clean steel rolls, ring rails, leather aprons, check for worn parts over frame; (3) level and line frame; (4) level and line stands; (5) remove and clean head gears; (6) grease frame and adjust tape idlers; (7) remove bolsters and drain oil; (8) re-fill spindle bases and replace bolsters and spindles; (9) clean around spindle bases; (10) level ring rails; (11) check cross

shafts, weights and rockers; (12) plumb spindles; (13) set thread guides and door locks; (14) buff top rolls; and (15) start frame.

*Mill F:* We normally use three people cleaning steel rolls once a year. Our rolls are cleaned by wiping on metal polish with a rag then scrubbing with a soft wire brush.

*Mill G:* We clean steel rolls on a six-month cycle using a wire brush. Our cleaning crew consists of two regular cleaners and one head-end cleaner. While cleaning steel rolls we also clean and adjust all parts such as neb bars, levers, saddle screws, roving trumpets, roving traverse, Pneumafil tubes and head-end of frame. Worn gears, studs, cap bar nebs, top rollers, cradles and aprons are replaced.

*Mill H:* We use a four-man cleaning crew to clean our chrome-plated rolls every two years. The operation consists of: (1) check for crooked rolls while the frame is running; (2) stop on the doff; (3) remove the rolls from roller stands and place on racks; (4) wipe rolls with wet waste then wipe with dry waste; (5) check lining of roll stands; and (6) grease stands and replace rolls.

*Mill I:* We have a cleaning crew of seven people (one overhauler, one helper and five cleaners) who clean our steel rolls with a brush every six months. All drafting element parts are removed, cleaned, repaired as needed and replaced.

*Mill J:* We use one head scrubber and five scrubbers to clean our Casablanca system steel rolls every 12 months. When steel rolls are taken out of frames they are placed on racks. Rolls are washed with white gas, scrubbed with card clothing brush, and wiped with clean waste.

*Mill K:* We clean steel rolls with wire brushes and mineral spirits. We use a four-man overhauling crew to clean steel rolls every 3,600 hours of operation. The overhauling crew: (1) lines and levels frames; (2) levels weight levers; (3) levels and tightens ring rails; (4) overhauls and sets builder motions; (5) tightens and steadies creels; (6) cleans and sets roller stands; (7) cleans rollers; (8) cleans ring rails and lifter rods; and (9) checks and greases idle pulleys. The crew also checks steel rolls, outrigger bearings, gearing, cylinder bearings, taper on bobbins, stroke and cylinders. Additional work of the overhaul crew is to change frames from cotton-to-rayon or back and to change from warp-to-filling or back, as needed.

*Mill L:* We have a two-man crew take out all rolls and clean and inspect all drafting system parts on a four-month cycle.

*Mill M:* We use the Guillet Overhauling System every four months on our frames. We have a five-man overhauling crew. The work sequence: (1) remove all gears from head-end; (2) check all bearings in head-end; (3) check Bijur oiling system; (4) clean tanks for Bijur oiling system; (5) clean top rolls for buffing; (6) grease all anti-friction rolls; (6) clean and replace any worn top and bottom aprons; (7) clean vacuum tubes; (8) remove all replacement aprons; (9) remove steel rolls to roller stands; (10) check all stands and steel rolls; (11) clean rolls with metal polish; (12) grease



all ball bearings; (13) clean oil holes in cross-shaft and oil; (14) wash creels and bobbin holders with soap and water; (15) oil coggles in traverse rods; (16) set vacuum tubes to steel rolls; (17) set bottom aprons, top rolls and weight levers; (18) put frame back in operation.

**Mill N:** We have a two-man crew cleaning steel rolls the year round. Each frame is cleaned every six months. The operation consists of: (1) clean roving creels with steel wool; (2) blow off complete frame; (3) take out and scrub steel rolls; (4) align tension roll to apron; (5) align spindle tape tension pulleys; and (6) clean bobbin holders.

**Mill O:** We use two people to clean steel rolls every six months with steel wire brush, rags and cleaning compound. We clean all drafting system, gears, etc.; and replace all worn parts. The frame is set after cleaning.

**Mill P:** We have five people in our scrubbing crew who get around to all frames three times a year. Scrubbing operations are: (1) break down drafting element and traverse motion—clean gears; (2) clean top rolls; (3) clean saddles; (4) clean and grease stands; (5) clean steel rolls with wire brush; (6) clean lifter rods; and (7) cut off spindle chokes.

**Mill Q:** We use a four-man crew (one spindle plumber, one overhauler and two cleaners) to scrub steel rolls when frames are overhauled. This overhauling takes place every 8 to 12 months. The work consists of: (1) stock removed; (2) gears dismantled, checked and necessary parts repaired or replaced; (3) steel rolls removed and cleaned; (4) top rolls buffed; (5) aprons replaced when necessary; (6) drafting elements, separator blades, creels and under-frame cleaned; (7) builder motion cleaned and necessary repairs made; (8) tapes and idlers checked and repaired as necessary; (9) Pneumafil unit inspected and cleaned; (10) cylinders and drive inspected and repaired as necessary; (11) frame lined and levelled; (12) frame built-up and put in production; and (13) spindles plumbed the following day (all spindle repairs are made at this time).

#### Question No. 2—What is the life of leather or synthetic bottom aprons?

**Mill A:** Life of synthetic aprons running rayon is from 12 to 18 months. Synthetic aprons on cotton last about 2½ years.

**Mill B:** Our synthetic bottom aprons are two years old and still running.

**Mill C:** Apron life varies widely and depends on stock, count, running conditions and roll condition.

**Mill D:** Leather—2½ years; synthetic—5 years.

**Mill E:** We have found leather will run only about one month on coarse numbers on Duo-Roth frames. Lighter counts give leather apron life of about one year. Synthetic aprons run about three years. On our Tru-Set frames, leather lasts about two years and we expect synthetic to last three or more years.

**Mill F:** Leather apron life is about 9 to 12 months. Synthetic apron life is 12 to 18 months.

**Mill G:** Synthetic aprons have average life of three years. Leather aprons last an average of two years.

#### Question No. 3—What method do you use to clean flutes on vacuum ends-down collection system?

**Mill A:** Little cleaning is necessary. Use brush.

**Mill B:** Flutes are removed, ends are opened and a humidifier brush or bottle brush is used to clean the flutes.

**Mill C:** Wipe flutes after removal from frame.



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*Mill D:* Blow out flutes daily with small blow pipe, brush at roll scrubbing time.

*Mill E:* Use bottle brush welded on rod and placed in electric drill to clean tubes. Clean at regular overhaul time.

*Mill F:* Mop out with a mild soapy water and rinse in clean water.

*Mill G:* We have not had to clean inside of tubes. Spinners use a special cleaning tool to clean outside of tubes.

*Mill H:* Since anti-friction top rolls were put in, cleaning tubes is not a problem. We do not schedule this work at all.

*Mill I:* We clean vacuum collection tubes with soap and water solution and long handled brushes.

*Mill J:* We scrub our flutes with a hard bristle brush.

*Mill K:* We clean flutes with brush twice weekly.

*Mill L:* Bristle brush and warm soapy water are used to clean flutes.

*Mill M:* We use broom handle with a rag attached and cleaning compound.

*Mill N:* Flutes are removed and cleaned with spiral brush.

*Mill O:* We use a small brush to clean inside of tubes.

**Question No. 4—How often do you grease front anti-friction top rolls and change oil on anti-friction spindles?**

|               | Grease Front Top Rolls                                                  | Change Spindle Oil                   |
|---------------|-------------------------------------------------------------------------|--------------------------------------|
| <i>Mill A</i> | —                                                                       | Six months.                          |
| <i>Mill B</i> | Oiled once/week.<br>Tipped once/week.<br>Re-greased once/3 months.      | Do not change, oil is added.         |
| <i>Mill C</i> | Have not oiled our Gwaltney rolls in 2 years of operation.              | Once/year.                           |
| <i>Mill D</i> | 10-30 days depending on count and quality. Use graphite every 3 months. | Grease every 5 years.                |
| <i>Mill E</i> | Once/3 years.                                                           | Once/8-12 months.                    |
| <i>Mill F</i> | Once/3 years.                                                           | Once/year.                           |
| <i>Mill G</i> | Once/4 years.                                                           | When oil turns dark.                 |
| <i>Mill H</i> | Once/3 months.                                                          | Once/year.                           |
| <i>Mill I</i> | Once/3 years. Replace bearings at that time.                            | Replenish/6 months, Replace/2 years. |
| <i>Mill J</i> | Once/18 months.                                                         | Once/8 months—SKF type.              |
| <i>Mill K</i> | Replace bearings/4 years.                                               | Replenish/year, Replace/2 years.     |
| <i>Mill L</i> | —                                                                       | Once/3 months.                       |
| <i>Mill M</i> | Once/year.                                                              | Replenish/4 months, Replace/year.    |
| <i>Mill N</i> | Once/year.                                                              | Once/6 months.                       |
| <i>Mill O</i> | Once/2 years.                                                           | Replenish/year, Replace/5 years.     |

**Question No. 5—How often do you plumb anti-friction spindles?**

- Every six months—1 mill.
- Every 8-12 months—1 mill.
- Every year—10 mills.
- Every 18 months—3 mills.
- Every 2 years—2 mills.

**Question No. 6—How often do you line and level spinning frames?**

- Once per 6 months—1 mill
- Once per 8-12 months—1 mill
- Once per 12 months—7 mills
- Once per 18-24 months—1 mill
- Once per 2 years—2 mills
- Haven't in 4 years—1 mill

**Question No. 7—Do you replace all aprons at once or leave good aprons on the frame? If good aprons are kept on the frame, do you group them together or leave them mixed with new aprons?**

Leave good aprons on frames—9 mills.

Group newly installed aprons together—13 mills.

Replace all aprons with either new aprons or those left over (after cleaning) from previously scrubbed frames—5 mills.

**Question No. 8—How many frames are cleaned per operator per shift?**

*Mill A:* Four people scrub three 204-spindle frames in eight hours.

*Mill B:* Our two operators clean 1½ frames per shift.

*Mill C:* One frame per shift is cleaned by our three-man crew.

*Mill D:* Three employees clean one Duo-Roth or two Tru-Set frames per shift.

*Mill E:* One operator cleans one frame per shift.

*Mill F:* Four-man crew gets one frame per shift.

*Mill G:* Our seven-man crew thoroughly cleans and overhauls 0.57 frames per shift.

*Mill H:* With six people on scrubbing crew, nine frames are scrubbed per eight-hour shift.

*Mill I:* When cleaning cradles, we clean one frame per operator per shift. When cleaning steel rolls, we clean one-half frame per operator per shift.

*Mill J:* Two-man crew cleans one frame per shift.

*Mill K:* Five people clean two frames per shift.

*Mill L:* Each operator cleans 1½ frames per shift.

*Mill M:* Each cleaner cleans one frame per shift.

*Mill N:* Five steel roll scrubbers clean three frames per eight hours.

*Mill O:* Four-man crew cleans and overhauls one frame per shift.

**Question No. 9—What records are kept on maintenance program?**

*Mill A:* When new steel rolls are placed in the frame, we stencil the base rail and head-end of the frame. When new rings are installed, we stencil the base rail at the front end. Over-frame cleaner cuffs have the installation date printed on them. We keep a ledger to serve as a record for each frame for new aprons, cylinder, roll scrub, spindles plumb, frame align and level.

*Mill B:* No records.

*Mill C:* We group our frames into three groups because of the difference in the frames. We record the date we start on a group and the date we complete the group. Also, if any frame requires some special maintenance, we record this date.

*Mill D:* Maintenance information is posted in foreman's office each day. Permanent records are kept.

*Mill E:* Individual file cards are kept for each frame. All major adjustments, repairs and replacements are entered on a card. Dates of overhauling are also entered on card.

*Mill F:* Ledgers are kept with page numbers representing a given frame. Any changes or maintenance done to the frame other than routine work are recorded with date the work was performed. One ledger lasts several years.

*Mill G:* We keep records by frame as to dates of top roll buffing, overhauling and roll cleaning.

*Mill H:* Each frame is listed in a book by number. Each

(Continued on Page 64)



# Cavalla-Roth—A New Fiber Control Refinement

TESTS PERFORMED BY DIXON ON DOUBLE-APRON ROTH AND CASABLANCAS SYSTEMS RESULT IN THE CAVALLA-ROTH

By **ROBERT RULON MILLER**  
President, Dixon Corp.



COMPARATIVE tests between the two most commonly used double apron spinning drafting systems, Casablancas and Double Apron Roth, led to the development of the Cavalla-Roth system. Two 24-spindle laboratory frames were set up to spin yarns from 4's to 120's. Our frame utilized the newest one-piece Casablancas type cradle and a Dixon Custom Saddle Guide Drafting arrangement, and the other frame a Double Apron Roth Custom Saddle-Guide drafting with the usual type cage for long bottom apron arrangements. The same roving bobbins were used on both tests, switching them from one frame to another to avoid differences due to stock.

After several months of testing, the results indicated perhaps something obvious to spinners, but a concrete re-statement of the facts sparked an idea which eventually became Cavalla-Roth. The two double-apron systems—Casablancas with short top and bottom aprons, and Double Apron Roth with a short top and long bottom apron—performed equally well as to yarn qualities up through 45's. Between 45's and 55's, it was possible to get the Double Apron Roth to equal the two short belt system but more careful settings and finer adjustments were necessary. Over 55's, quality—measured by strength, evenness and ends-down—definitely diminished on

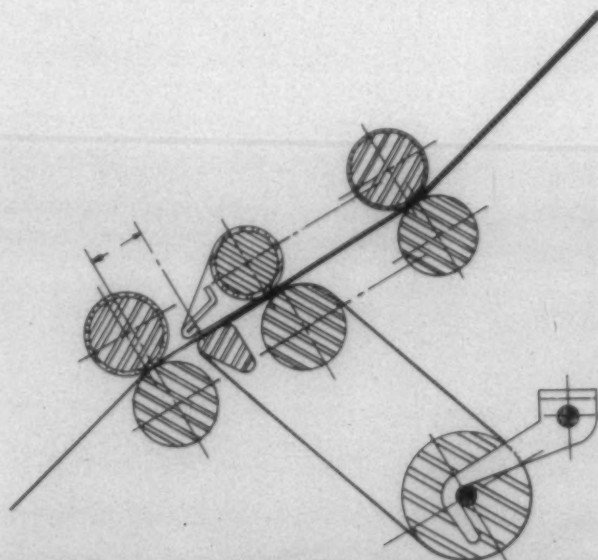


Fig. 1—On a regular Duo-Roth system top and bottom aprons turn away from each other at their forward extremities.

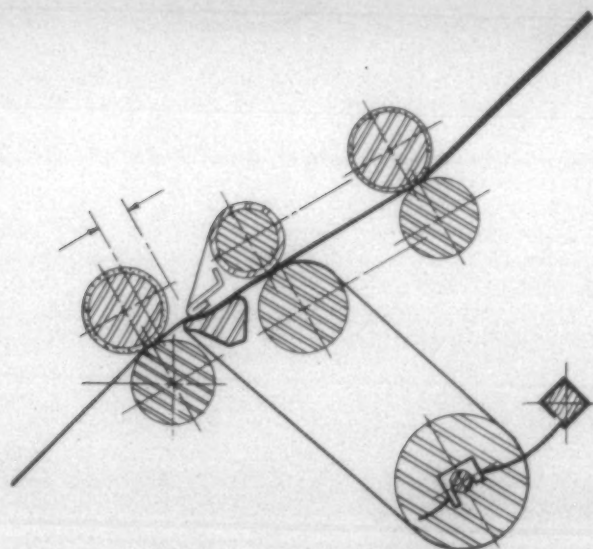


Fig. 2—On Cavalla-Roth system, bottom apron turns toward top apron, nose bar allows aprons to undulate, tensioned apron pulley assures proper apron path so nose bar can be closer to the front roll.

the Double Apron drafting, until at 100's it became difficult to keep the ends up. At 120's, we could not get usable yarn from the Double Apron Roth system. The Casablancas short belts were still performing satisfactorily.

However, in defense of Double Apron Roth, it was ap-



Fig. 3—Dixon-Cavalla-Roth drafting is available as a complete changeover from the roller beam up (as shown) or as a partial changeover on Duo-Roth.



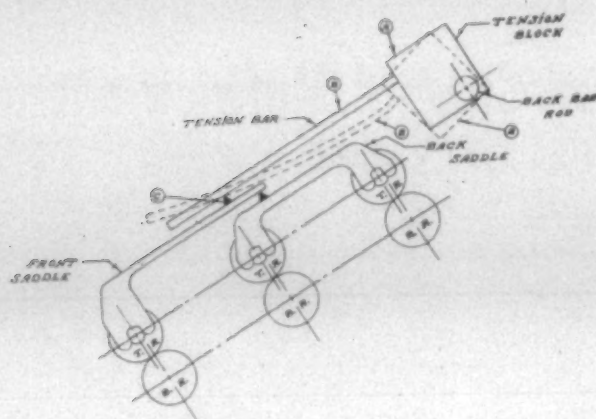


Fig. 4—Schematic drawing of the principle of tension weighting. (See text for legend).

precisely cleaner all the way through the tests. It was also easier to adjust apron openings by changing the spacer shims on the cage bottom.

Usage of these two systems in the field bear out our findings. Nearly all, if not all, fine yarns of 80's or over are spun on the Casablancas short belt system and a very large percentage of coarse counts, 2's to 12's, are spun on the Duo-Roth long bottom belt system. Obviously, there are exceptions in both instances. Our problem was "why?", and our testing, although not adding any new knowledge to the industry, re-emphasized the differences between the two systems.

As a long-established manufacturer of parts and changeovers for both Casablancas and Roth, we had no ax to grind in proving either system superior, but we did feel duty bound to prove to ourselves the "why?" of these test results.

The answer is simple, once known. Mr. Albert Cavallaro (hence the name Cavalla-Roth, Cavallaro with *th* on the end) felt that on the Double Apron Roth, both aprons, top and bottom, turn away from each other at the crucial point of their job. Just as the fibers leave the aprons and pass through that "no-controls land" on their way to the nip of the front pairs of rolls, the aprons open up and let go of the fibers and control goes out the window (Fig. 1). A Casablancas cradle, on the other hand, has tilted cradle pins that pinch or force the aprons together prior to their turning apart.

This same idea was tried by us on the long bottom apron

system and without success. In fact, patents show it has been tried as far back as 1940 in France. Not until we tightened the bottom apron did we achieve the expected movement. This allowed us to put the nose of the bottom apron bar further forward, closer to the nip of the front rolls, because the bellying of the bottom apron was eliminated. Formerly the bellying of the apron, as it turned around the nose bar, prevented a close setting to the front bottom steel roll. The tightening also allowed us to force the bottom apron into the exact path we wanted it to follow.

Aprons move forward in waves, not in straight lines. The turning of the top middle roll, for instance, pulls the apron over the roll and pushes the apron forward to pass over the apron pin. The pin is a resistance to the forward movement and tends to make the belt buckle or undulate. The "if you can't lick 'em join 'em" technique was used and the bottom apron nose bar was formed like this wave motion so both aprons would undulate together keeping close contact—something like dancing partners. Apron contact means fiber control. At the exit end of the aprons, the bottom apron turns upwards towards the top apron, slightly "kissing" it before turning away. This moves the exit point forward and reduces the uncontrolled area between the exit of the aprons and the entrance of the front rolls (Fig. 2).

The heart of Cavalla-Roth drafting is the specially shaped undulating apron nose bar and the tensioning of the bottom apron. A few simple parts are all that's needed to make a Cavalla-Roth partial changeover on existing Double Apron Roth frames. However, with improvement in yarn strengths of 10% or more resulting from Cavalla-Roth, it was felt that the idea should be incorporated in a complete changeover from the roller beam up (Fig. 3). This changeover incorporates the undulating apron nose bar and tightened bottom aprons, as well as an entirely new concept of top roll weighting.

### Tension Weighting

To avoid stirrups, levers, screws, weights and even springs and magnets, and to provide means to accurately measure and check weights, new tension weighting was developed. Weight is applied through the deflection of a quarter-inch carbon steel round bar. The theory of the system is shown in the schematic drawing in Fig. 4. When block A, mounted on the back bar rod, is pivoted forward to the position shown in

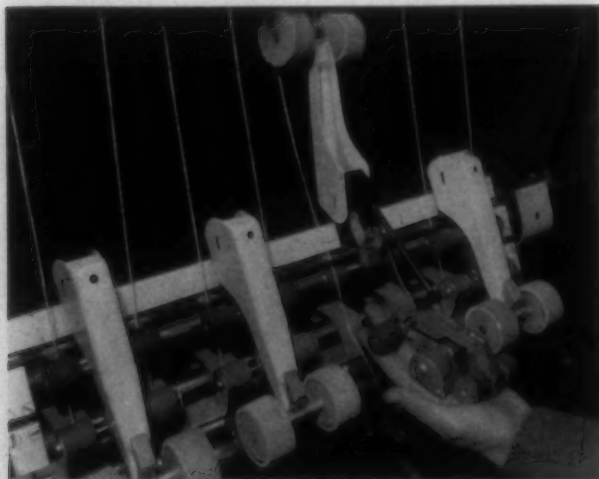


Fig. 5—A unit of three rolls is easily removable from the tension bar for cleaning, repairing or replacement.

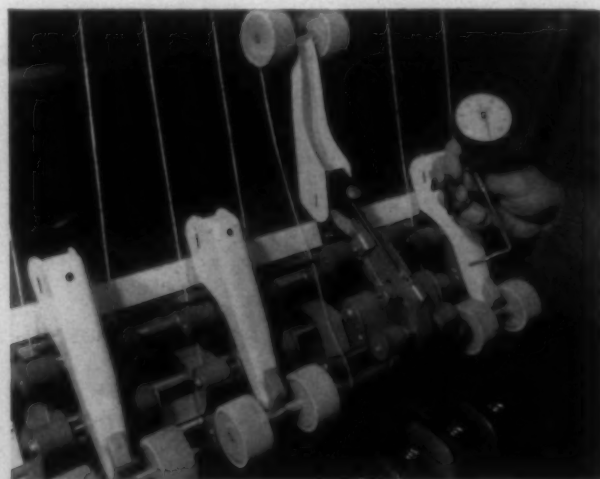


Fig. 6—To install the tension meter, the latch cover is raised as shown.

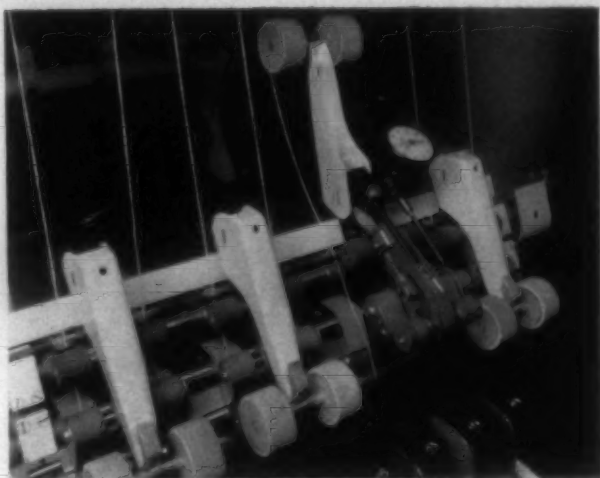


Fig. 7—The tension meter is clamped on pivot block with arm under tension rod. Note zero reading on meter.

dotted lines, the tension bar *B* deflects to the dotted line position, thus applying pressure at point *C*, which is distributed throughout the saddle and roll assembly. To change the pressure at *C*, one merely must rotate block *A* counter-clockwise to increase the pressure, and clockwise to decrease the pressure. To measure the pressure at *C*, we need only to measure the deflection of the tension bar *B* at a set point since, according to Hook's law, stress is equal to strain, and there is a direct positive relationship between pounds delivered and deflection.

The above is only schematic. In actuality, the system is completely encased in the top arm. Lowering the top arm tilts the block forward and applies weight; raising the arm moves the block back and releases the weight. There is only one motion with one hand to lower the top rolls and apply the weight and the same single motion is used to raise the top rolls and release the weight. All these sets of rolls can be conveniently and easily removed from the top arm and tension bar (Fig. 5). This prevents any "break backs" due to complications in the drafting assembly, as a new set of rolls can quickly and easily replace a damaged set while repairs are being made in the shop or maintenance area. Of course the front top roll, only, may be swiftly removed and replaced to clean laps, etc.

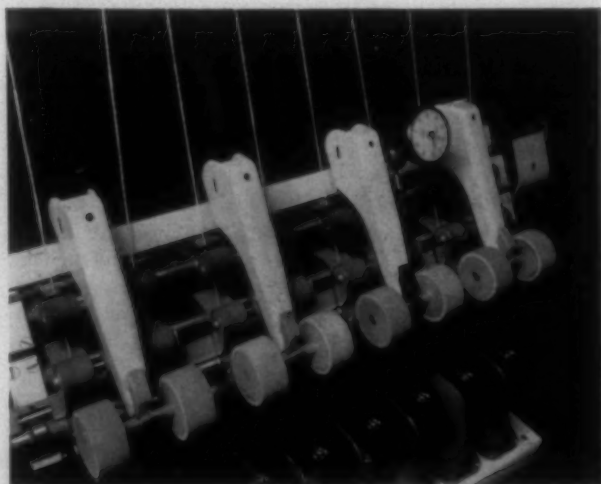


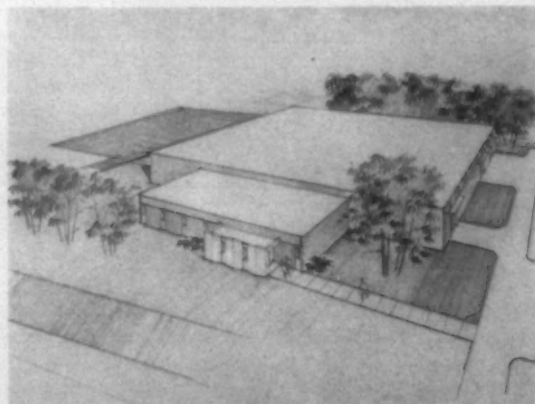
Fig. 8—With tension meter in place, the latch cover is lowered. The meter shows a reading of 70 pounds. Poundage can be raised or lowered by turning special screw in hole on cover.

## Tension Meter

The tension meter (Figs. 6, 7, 8) is a small instrument easily fitted to the block. The dial gauge reads in pounds and indicates the pounds pressure applied on the total assembly. This total pressure may be varied within a 100-pound range by a wrench inserted through the small hole in the back of the top arm. Turning the wrench clockwise decreases the weight; counter-clockwise increases it. This is a special wrench so that only those authorized can make adjustments.

No oil is required on any rolls, top or bottom. Front pairs of rolls have anti-friction type bearings. Middle and back pairs have Rulon plastic bearings. Roll spreads can be adjusted individually for drafting up to 1 $\frac{9}{16}$ -inch fibers in two-zone drafting and 3 $\frac{1}{2}$ -inch fibers in single-zone drafting. The changeover is provided on 30°, 45° or 60° roll stands as required. Revolving front clearers are held in a nylon holder and can be individual to each arm or as a unit across a single-roll stand.

## Dixon Moving South



Architect's drawing of Dixon Corp.'s new 23,000-square-foot plant to be built in Monroe, N. C. The project is scheduled for completion in late Spring or early Summer.

AFTER 85 YEARS in New England, the Dixon Corp. is moving its textile manufacturing, engineering and sales facilities to Monroe, N. C.

Robert Rulon Miller, Dixon president, announced the move January 4 at a dinner meeting in Monroe attended by civic officials who worked with Dixon in effecting the transfer.

Several reasons were cited for the transfer: (1) to be nearer customers and thus effect better deliveries and service; (2) to get away from New England's unsatisfactory weather conditions; (3) a hope for increased productivity from employees; (4) lower building costs; and (5) a desire to become a factor in the rapid growth of the Southeast.

A year ago Dixon purchased the machine shop of Southern Spindle and Flyer Co. in Charlotte, manufacturer of steel bottom rolls for spinning and roving frames. These facilities will be moved to Monroe, to be joined by the firm's engineering and sales facilities from Bristol, R. I. Sales of Dixon changeovers in the South were formerly through manufacturers agents.

Initial employment at the Monroe plant is expected to be about 100 persons.



# Fall Meeting Of S.T.A.'s Piedmont Division Features Group Discussion On Opening, Picking

A highlight of the Fall meeting of the Piedmont Division of the Southern Textile Association was the following group discussion on opening and picking. Acting as moderator for the group was J. L. Wright of Johnston Mfg. Co. The meeting was held December 10 at Charlotte, with Highland Park Mfg. Co. as host.

## How many bales of cotton do you consider a good mix?

*Moderator:* Since there is so much emphasis currently being placed on the optimum number of bales that should be opened to give a good mix, let's open our discussion with this question: how many bales of cotton do you consider a good mix?

*Mill A:* The more you vary the different lots, the better blend you will get. We try to blend from at least four different lots. When I say lots, I mean different areas for your cotton.

*Moderator:* Do you consider it more important to blend from lots or from your Pressley strengths and your Micronaire readings?

*Mill A:* In our particular case, we try to take a combination of Pressley break and Micronaire readings and come up with a good average. We'll always have lots with high breaks and lots with low breaks; lots with high mike and lots with low

mike. We blend approximately 60 bales at a time. And at the moment, we are running 50% irrigated cotton and 50% rain-grown cotton. That is, 30 bales of one and 30 bales of the other. We try to see that we are running out of at least two lots of rain-grown cotton and two lots of irrigated cotton, which would make four different lots. There will always be at least one lot of low break cotton in there. We do this to keep from having too many weak lots in a blend.

*Moderator:* We don't always come out with what we want to come out with. The first and most important problem that we have at our mills is that we sell a great deal of colored yarns, and we have to control our lots according to color. We would like our blends to come out with about an 85,000 Pressley strength and with a 4.0 Micronaire reading. But on certain years, we find that this is very difficult to accomplish.

Does anyone else have a theory about what actual Pressley break and Micronaire readings would be best if you were making combed yarn sales yarn? I know some of you men are weavers and you wouldn't require the same characteristics in cotton that we would. However, if you are weaving combed yarns you'd be very close to the same thing that we are.

## How many pounds per hour should be fed through an opening and picking line?

How many pounds per hour do you feel that you should feed through an opening and picking line?

*Mill A:* We try to keep our opening lines down to 450 to 500 pounds an hour. I think the best speeds for cleaning would depend on what type machinery is in the plant. Ours is probably on the low side of the industry, but we get better cleaning that way.

*Mill B:* I find there is a different set-up in every mill I visit. The speeds are more or less what a mill has to run to stay in business. I think the lower a mill can run and still be practical is the best that can be run. At our plants, production is approximately 700 pounds, which is pretty high. I was in a mill the other day that had two lines feeding five pickers. They were getting 750 pounds per hour per line. This was a total of 1,500 pounds an hour. We try to come out with about 280 pounds per picker.

*Moderator:* I think a necessary part of the question would be—Is the cotton getting clean?—Are you looking for cleanliness?

*Mill C:* Every mill you go into is different. One of the reasons we are different is because we have been paying attention to quality from the carding process on through without too much consideration for the opening and picking operations. Several people have asked me what would be the best set-up if we were to go into these rooms to make some changes. Would I run 250 pounds to the feeder or 250 pounds to the picker or what? I think we'll all have to find our problems in these two rooms and have to put to work some of these quality control practices that we know will help.

*Moderator:* In the few yarn mills I have visited, they are



Inscoc, Wright

Newly elected officers of the Piedmont Division of the Southern Textile Association are J. W. Inscoc, general superintendent, Carolina Mills Inc., Maiden, N. C., chairman; and J. L. Wright, general superintendent, Johnston Mfg. Co., Charlotte.



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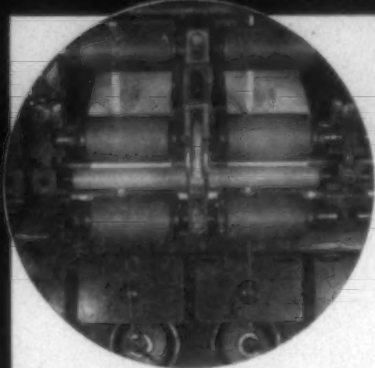
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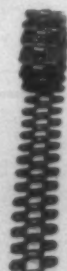
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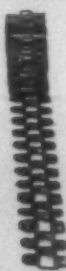
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running about 700 to 800 pounds per hour in their opening rooms, which would make about 350 to 400 pounds for each picker.

*Mill D:* I think one of the main things in your opening line is not how much you are putting through it but what percentage of the time is it running. We would like to see ours run 85% of the time, but we haven't got many doing it.

*Moderator:* We'll get into that question a little later in our discussion about the control of humidity in the opening room.

*Mill E:* I was talking to one of the biggest waste dealers in this area recently, and he came up with this observation. He said that we would be amazed at the difference in the waste that he buys from some 40 mills in this area. There were no two mills that took out the same type of waste. He said waste taken from one mill might be twice as rich in good fiber as that from another. He believes many mills are throwing away a tremendous amount of good cotton, while others aren't taking out enough cotton in their opening and picking operations.

### What tolerance do you use in your picker lap?

*Moderator:* What tolerance do you use in a picker lap? Do you use a half a pound overweight, half a pound underweight, and rerun any lap that was out? Or do you allow a full pound?

*Mill A:* I doubt that there is very little correlation in a full picker lap and in your yarn. If you bring off a lap that would be five or six pounds off weight then you'd better call your fixer and find out what happened.

*Moderator:* What would you consider a good tolerance? You have to set some kind of tolerance because we usually pay less attention to our pickers than possibly any other operation in the mill.

*Mill A:* We allow a pound either way in our plants. Of course, that would depend on what weight lap you were making too.

*Moderator:* I think that the final results of the lap should be determined by the holes and the uneven screening in it, and not by the poundage from the scales.

*Mill A:* We usually have our laps come out at about 55 pounds. We check the weight every lap and also check them on the Saco-Lowell Sliver Tester. Our C.V. is watched very closely.

*Mill B:* In our mill, we have a very good feed for our pickers. Feed, in my opinion, is probably more important in making a good picker lap than any other thing with the possible exception of screening.

*Mill C:* When you find that a lap is off, who makes the adjustments?

*Moderator:* In our mills the picker tender adjusts the evenness motion.

*Mill C:* Is that true all over the industry?

*Moderator:* I think it's pretty general. When I ran pickers, I made my own adjustments.

*Mill C:* We don't allow picker tenders to make any adjustments unless there is a supervisor with him.

*Mill D:* We have graphs on each of our pickers. The weight of each lap is spotted on that graph. When it starts to inch upward, the tender makes the adjustment. After he makes an adjustment, he must circle that lap weight to indicate that he has made a change.

*Mill C:* We go one step farther; we get the supervisor.

*Mill D:* We have ten pickers and our supervisors stay pretty busy.

*Moderator:* We feel that if you had the feed adjusted properly, the picker would probably run eight hours without making any changes.

### **Do you run humidity in your opening room? How much?**

The next question is, do you run humidity in the opening room? How much?

*Mill A:* I think you should run 50% or better.

*Moderator:* I agree with that. This question brings up a very interesting problem that we had in one of my opening rooms before we had it humidified. I felt that there was a great change in the humidity in this room over a 24-hour period, so I hung a recorder which would record the humidity in that room for approximately three weeks. I found that the chart would show from 25% on the low side to as high as 80% over in the early hours of the morning, when you might get a ground fog. Of course the cotton was heavier at 80% than it would be at 25%. You can't keep the opening room adjusted and feed it regularly all of the time unless you start in that area with controls.

*Mill B:* Opening rooms are generally hard to control because of their distance from the picker room. Also, the condensers are constantly pulling the conditioned air from the room. We are working on a system to pull this air from the outside.

*Mill C:* We have humidity in our opening rooms, and it is controlled by an Aldrich moisture control system.

*Moderator:* What good would a moisture control do on the front of a picker?

*Mill C:* It isn't on the front of the picker. It's hanging in the room.

*Moderator:* Well, how about one of those electric ones?

*Mill C:* I haven't had any experience with those.

*Mill D:* You allow for your corrected weight.

*Mill A:* We have an air control system in our picker room, and the exhausted air is replaced.

*Mill B:* Our opening and picking lines are in the same room. This makes the humidity easier to control.

*Moderator:* What would be a good percentage of relative humidity to keep in the picker room? I'd like to have around 50%.

*Mill A:* That wouldn't be too high. I'd say around 55%.

*Mill B:* The wetter your cotton, the less you're going to get knocked out of it.

*Moderator:* That's the point. If you have your cotton well humidified, does it interfere with the cleaning of the cotton?

*Mill C:* I think it would.

*Mill D:* Why turn on the humidity in the first place? The reason I ask is because the idea of turning water on the cotton is to prevent the breakage of the fibers. Dry cotton is weak cotton.

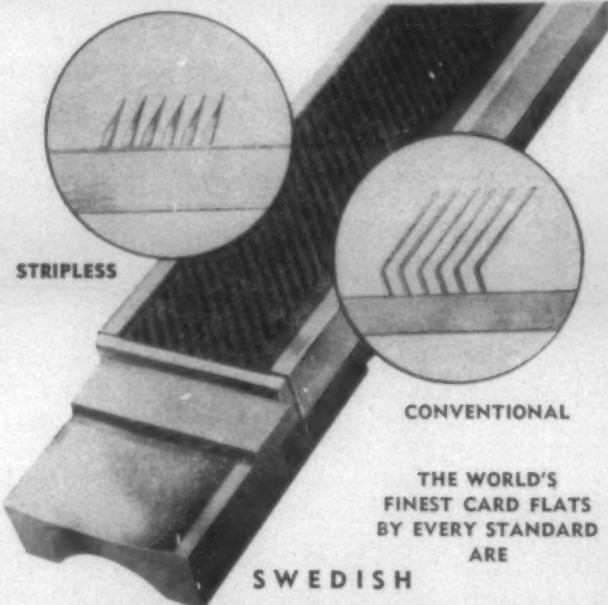
*Moderator:* Do you think that cotton at 50% relative humidity will clean as well as 25% humidity? I'd think the dryer the cotton, the cleaner it would be.

*Mill E:* I think the answer to that is overheating at the gin. They really dry the cotton and do a marvelous job of cleaning it. But they ruin it.

*Mill F:* If you get it too dry, you waste a lot of it. You'll sure ruin the cotton.

*Moderator:* Quite a bit of irrigated cotton coming into this

(Continued on Page 64)



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# The Loomfixer And His Job

## Part 26

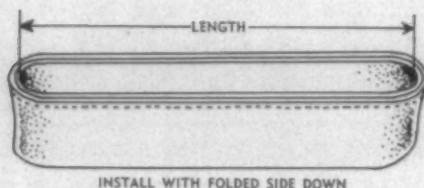
### THE ADVANTAGES OF USING ENDLESS CHECK STRAPS FAR OUTWEIGH THE EXTRA LABOR OF INSTALLATION

By WILMER WESTBROOK

**T**HE endless strap has three distinct advantages over the conventional strap: it will last longer under average conditions, is less affected by atmospheric changes, and, when correctly installed, requires less frequent adjustment.

The main objection to the endless strap, on the part of the loomfixer, is that it is harder to install than the conventional strap and the friction fingers must be adjusted to closer tolerances. However, most loomfixers like the endless strap once they learn how to set the fingers and realize that this strap requires less attention than the conventional strap.

It is important to obtain the correct length strap for maximum service life and checking efficiency. The strap is measur-



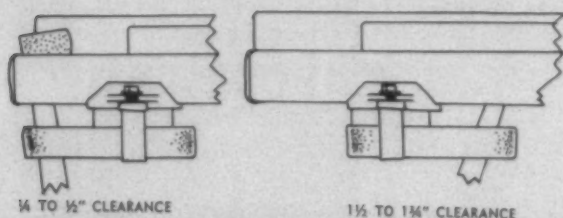
The endless check strap should be the correct length for the loom and should be installed with the folded side down.

ed by its inside length and comes in lengths of from 7 to 10½ inches, in quarter-inch increments.

The manufacturer will recommend the correct length strap for any model or type loom, or the correct length of strap can be determined as follows: With the picker stick resting against the lay end strap, or at its extreme backward throw, there should be a clearance of one-fourth to one-half inch between the inside surface of the strap and the stick with the strap pulled snugly against the inside fingers.

With the picker stick pulled all the way forward toward the center of the loom and the strap pulled snugly against the outer fingers, there should be a clearance of 1½ to 1¾ inches between the inner surface of the strap and the front of the picker stick.

It is necessary to remove the picker stick from the slot in the lay to install an endless check strap. New model lays have a removable plug in the end of the lay. With this type



The strap of correct length will have these clearances or gaps between the inside of the strap and the picker stick.

lay it is only necessary to remove the plug, the front and rear friction fingers, and to loosen the lug strap to change straps.

With the old type lay the stick must be removed, either by taking the stick from the parallel assembly or by removing the assembly from the rocker shaft. The lug strap must be removed from the connection.

It is advisable to make a pencil mark on the lug strap connection before the strap is removed to make it easier to replace the strap in the same position. Install the endless strap with the folded side down.

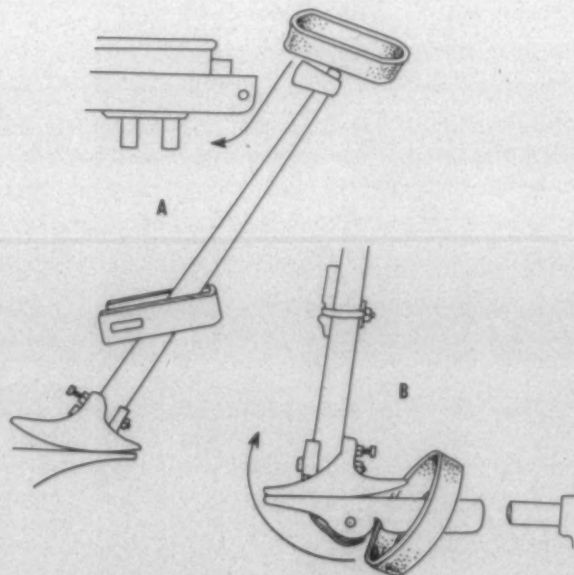
Setting the adjustable friction fingers is the hardest part of the endless check strap installation. Both front and back fingers must be set to exert the same amount of pressure to the strap. It is this setting that baffles some loomfixers and causes their dislike of the endless check strap.

The setting of the fingers can be tested by hand before the loom is started. Pull the strap back and forth through the fingers and see that each finger exerts equal pressure.

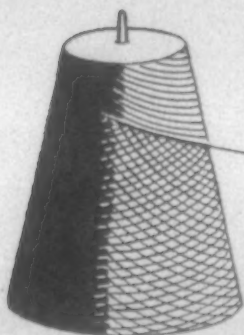
If one finger is tighter than the other the strap will have a tendency to turn. The result will be uneven checking action and a shorter service life for the strap.

The strap should stop the picker stick 1½ to 2 inches from the end of the lay slot and then brake it smoothly when the shuttle pushes it back.

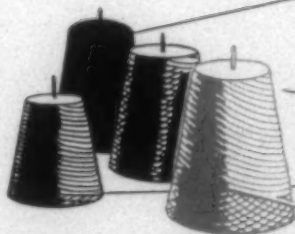
Since the parallel spring pulls the stick back after each pick it is important to have this spring under correct tension also. If the spring is too weak, the stick will not be seated



Newer looms have a removable plug or piece for the lay end (A) which simplifies installation of a new check strap. On older models it is necessary to remove the parallel assembly from the rocker shaft (B) or to remove the picker stick from the parallel assembly.



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firmly against the strap and if the spring has too much tension it will pull the strap through the fingers and nullify its checking action.

The tension of the parallel spring can be checked with a small scale. Pull the stick all the way toward the center of the loom with the scales looped to the end of the stick. The parallel spring should exert three to five pounds tension.

The protector rod spring also affects the checking action and can be checked the same way by attaching the scales to the protector rod finger and pulling it away from the binder.

The amount of tension needed for the protector rod spring will vary greatly and should be determined by a trial setting for each type and model of loom.

If the loomfixer will learn to correctly install and adjust the endless check strap he will find that it makes his job easier. He will not have as many rebounding shuttles after the weekend shutdown, it will not be necessary to make as many adjustments when there is a change in atmospheric conditions, there will be fewer replacements and the cost per hour of check strap service life will usually be less.

## Controlling Quality In The Weave Room

**FACTORS IMPORTANT IN WEAVE ROOM QUALITY CONTROL INCLUDE VIGILANCE, ACCURATE RECORDS AND FOLLOW-UP**

**A**N often asked, but rarely exactly answered question is: What is the *best* way to control fabric quality in the weave room? And while there is no precise reply to this query there are several keys that will help you answer it for your particular mill.

Weave room quality is the direct result of *vigilance*. Everyone in the weave room has got to watch the cloth. Everyone has a part. Supervisors inspect, weavers inspect, loomfixers inspect, cloth doffers have things to watch for, battery fillers also have to be on the look-out for certain things. Warp men, sweepers, smash hands, filling haulers and even the elevator operator must watch for certain things. The big pay-off comes with high quality, high efficiency weave room operation. Vigilance is the key but it must be done in a systematic fashion.

One good way to control weave room quality is dependent on having the complete co-operation of cloth room in identifying quickly the loom making bad cloth and the shift the bad cloth was made on. Using this system seconds tickets are placed in the fixers' hands by supervisors *with instructions on what to do*. You don't just tell a man, "Loom 426 is making seconds. Fix it."

Work done on a loom making seconds should be followed-up. This should be done not only by the supervisor but also by the loomfixer and the weaver.

### Talk It Over

When the loomfixer finishes inspecting and fixing whatever he thinks is causing bad cloth on a particular loom he should return the ticket to his supervisor and they should discuss the work. The weaver should be told about the loom and instructed to watch it closely. Even if everything seems to be O.K., the next roll of cloth off the loom should be taken directly to the cloth room for critical in-

spection. This general method is a good way to be sure the defects from that particular loom will not repeat in the next roll of cloth.

One of the oldest sayings around weave rooms is "Practically all the bad cloth made comes from a small percentage of the looms." Thus, in a 1,000 loom mill, almost all of the seconds will be coming from 35 or 40 looms.

Now, before someone says, "That makes it easy. All we have to do is find those 35 or 40 looms; fix them; and our seconds will drop to zero." Well, it doesn't work that way. You fix 12 or 15 and 12 or 15 more get out of fix. Fix some more and others get out of fix. It is an endless cycle and one that requires systematic procedures to correct. Preventive maintenance helps but doesn't completely cure the situation.

### Importance Of Records

Keeping accurate records on the looms is of great importance. A good place for a master record book to be kept is in the cloth room. When a seconds ticket is made out for a certain loom, the loom number, length of the roll, type of defect and date is entered in the record book. Certain pages or columns are assigned each loom in the mill.

This master record book is reviewed periodically by the cloth room overseer and the weave room supervisors. The numbers of looms which are chronic trouble-makers are quickly found by leafing through the book. The master record book provides the means to do the job. It is part of a program of systematic vigilance. However, it still takes *action* on the part of *people* to get anything done.

Of course, a weave room quality control program must include methods for marking the cloth so that the shifts can be identified. This is difficult but not impossible to do with loom-finished goods. Special types of chalk or string selvage markers are usually used for this purpose.

### Showing Up Seconds

Another part of the program is showing up seconds. If people make bad cloth and never hear from it again, they are justified in thinking that it's O.K. because the cloth got through the cloth room. Cloth should be shown up regularly and *to the right people*. Weavers should see

**What's the best way to control weave room quality? Why is it important for everyone—battery fillers, smash hands, warp men, cloth doffers and even the elevator man; not just weavers, loomfixers and supervisors—to be concerned with this problem?**



bad start-ups. Smash hands should see wrong draws on first cuts of cloth off new warps. Cloth doffers should see places where cloth was marked for doffing but was not doffed. Fixers should see greasy spots made by tools resting on the face of the cloth and rolls of cloth with jerked-in filling through a shift change. The showing up of the bad cloth should be done as soon as possible after doffed rolls are inspected.

Another part of effective weave room quality control is for supervisors to pick certain looms, or weaver's jobs and inspect cloth right on the loom. The supervisor who stops off a loom and rolls back 15 or 20 yards of cloth can show the weaver, on the spot, the type cloth he is making right at that instant! This is a most effective way of promoting vigilance among weavers, loomfixers and supervisors.

### Battery Filler Can Help

The battery filler can help greatly in making a weave room quality control program work. Quill cans hold the evidence of feeler motions not properly set or looms knocking out filling. These things make the battery filler's job harder so why shouldn't she always be on the look-out for them?

Cloth doffers can help by making sure that all looms flagged to be doffed are doffed at the right places. Break-outs, thin places and other defects have got to be run around the cloth roll before the roll can be doffed. But many a short piece has been made because the cloth doffer did not cut the roll where it was marked. Grease and oil on the ends of the roll are also things cloth doffers must watch carefully.

Warp men are faced with the grease and oil problem also. A blob of grease will soak in a warp and completely ruin many yards of cloth. Now we said that even the elevator man can help. He can, by not bumping filling boxes into new warps and cutting ends. Waste, if not seconds, can certainly be reduced if he will observe this precaution.

Weave room quality *can* be controlled—but the job requires everybody's help.

### Woolen Apparel Fabric Trend In '60 Was Toward The Lighter Weights

The trend to lightweight woolens in both men's and women's apparel was reflected in a marked shift during the first nine months of 1960 to production of woolens and worsteds weighing less than 13 ounces per linear yard.

During this nine-month period, production of lightweight wools comprised 75% of total wool men's apparel fabric yardage, up from 72% during the comparable 1959 period. The corresponding rise in lightweight wool women's wear fabrics was 59% to 63%.

In men's wear, the trend to lighter weights is especially marked in the increase in production of wool fabrics weighing less than nine ounces, while heavier weights suffered sharp production declines.

The woolen/worsted ratio to total yardage in men's wear fabrics remained constant in the overall picture for the two periods, although a shift to worsted construction is noted in the 13 to 16-ounce weights. This may well be a sign of coming importance for smooth, hard-surfaced men's wear fabrics in lighter weights.

Repeating the previous recessionary pattern, women's wear wool fabric production remained virtually stable, while pro-

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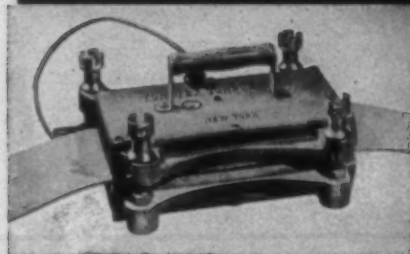
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duction of men's wear wool apparel fabrics in the aggregate suffered a decline. Important shifts in women's wear production in 1960 were from woollens to worsteds in less than nine ounce weights, and from worsteds to woollens in weights from 9 to 13 ounces.

Partial information reported for the first time in 1960 concerning wool fabrics containing more than 50% wool shows that 100% wool accounted for two-thirds of the 9 to 13-ounce weights in men's wear, and for over one-half of women's wear apparel fabric production of woollen constructions.

## Woolen And Worsted Goods Production Down In The Third Quarter of 1960

Woolen and worsted fabric production during the third quarter of 1960 was 68.2 million finished linear yards, according to figures given by the Bureau of the Census. This was 15% below the second quarter 1960 level and 16% below the output during the comparable period of last year.

The output of women's and children's clothing fabrics at 41.7 million finished linear yards was 10% below the previous period and the third quarter 1959 level. Men's and boys' clothing fabric production declined 24% from the previous quarter's level and was 25% below the output during the third quarter of 1959.

Production of woollen and worsted fabrics in New England amounted to 33.3 million yards, or 14% below the previous quarter's output. Production in the Southern states amounted to 27.9 million yards or 15% below the previous quarter's level.

### Production Of Woolen And Worsted Woven Goods By Type Of Fabric

| Type of Fabric                                             | July-Sept.<br>1960 | April-June<br>1960 | July-Sept.<br>1959 |
|------------------------------------------------------------|--------------------|--------------------|--------------------|
| (Thousands of finished linear yards)                       |                    |                    |                    |
| <b>WOOLEN AND WORSTED FABRICS<br/>(EXCEPT FELTS) TOTAL</b> | 68,212             | 80,719             | 80,882             |
| Apparel fabrics                                            | 66,679             | 79,303             | 79,135             |
| Government orders                                          | 485                | 850                | 211                |
| Other than Government orders                               | 66,194             | 78,453             | 78,924             |
| Men's and boys' clothing                                   | 24,453             | 32,228             | 32,741             |
| Women and children's clothing                              | 41,741             | 46,165             | 46,183             |
| Nonapparel fabrics                                         | 1,533              | 1,416              | 1,747              |

## Southeastern Section Of A.A.T.C.C. Names W. B. Amos Chairman For 1961

William B. Amos, Jefferson (Ga.) Mills, was named chairman of the Southeastern Section of the American Association of Textile Chemists & Colorists at the group's recent meeting in Atlanta. Named vice-chairman was Leon Tigler, Eagle & Phenix Division, Reeves Bros. Other officers are Richard D. Seed, Lanett (Ala.) Bleachery & Dyeworks, treasurer; and A. Kempton Haynes, Rohm & Haas Co., Atlanta, custodian.

Sectional committeemen elected by the section are: James H. Cox, assistant professor of textile chemistry, Auburn University; Howard L. Edwards, Bibb Mfg. Co., Macon, Ga.; Robert W. Wurst, Pennsalt Chemicals Corp., Decatur, Ga.; and James M. Youngblood, Wehadkee (Ala.) Yarn Mills.

## Woolen And Worsted Consumption Down Some 4% In November From October

The Bureau of the Census reports that the weekly average rate of fiber consumption on the woollen and worsted systems in November was 4% below the October rate and 11% below the November 1959 level. Production of man-made fiber top from tow without combing is excluded from the tabulation.

The weekly average raw wool consumption during Novem-

ber was 6,879 thousand pounds (scoured basis) or 7% below the October level and 6% below the November 1959 rate. Consumption of apparel class wool was 10% below the October rate and 12% below the rate in November of last year.

The rate of consumption of carpet class wool declined 4% from the preceding month, and was 3% above the comparable period of last year.

Consumption of fibers other than raw wool averaged 4,654 thousand pounds per week. This was approximately 1% above the rate of consumption during the preceding month and 16% below the November 1959 rate.

#### Fibers Consumed in Woolen Spinning And Worsted Combing November 1960

| (Thousands of pounds—scoured basis for greasy wools)           |                                |                                |                                |
|----------------------------------------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                                                                | Nov. 1960<br>Weekly<br>Average | Oct. 1960<br>Weekly<br>Average | Nov. 1959<br>Weekly<br>Average |
| <b>ALL FIBERS, TOTAL</b>                                       | 11,533                         | 12,050                         | 12,890                         |
| Raw Wool                                                       | 6,879                          | 7,431                          | 7,327                          |
| Apparel Class                                                  | 3,971                          | 4,401                          | 4,517                          |
| Woolen System                                                  | 1,757                          | 1,876                          | 2,038                          |
| Worsted System                                                 | 2,214                          | 2,525                          | 2,479                          |
| Carpet Class                                                   | 2,908                          | 3,030                          | 2,810                          |
| Noils, reprocessed and reused<br>wool, and other animal fibers | 2,572                          | 2,471                          | 3,218                          |
| Man-Made Fibers                                                | 1,786                          | 1,863                          | 1,998                          |
| All Other Fibers                                               | 296                            | 285                            | 347                            |

#### Kurt Winter Chosen To Head A.A.T.T.

Kurt John Winter has been named president of the American Association for Textile Technology for 1961. Other officers chosen by the association are: first vice-president, Giles E. Hopkins; and second vice-president, John M. Holland. Elected members of the board were Frederick E. Anderson, C. Eugene Coke and Albert E. Johnson.

Officers of the association's three chapters are as follows:

New York chapter: chairman, Hugh J. Beard; vice-chairman, J. Edward Lynn; treasurer, Richard W. Nelson; secretary, Bernice S. Bronner; executive committee—Jerome Campbell, Graham M. Richardson and Betty G. Wadsworth.

Appalachian Chapter: chairman, Wallace T. Jackson; vice-chairman, Robert T. Crawford; secretary, Robert L. Beard; treasurer, Mildred L. Wetzell; executive committee—Dr. Arthur Cresswell, Dr. Emmett V. Martin and Howard A. Thompson.

Piedmont Chapter: chairman, A. Frank Tesi; vice-chairman, D. S. Hamby; secretary, Charles D. Coleman; treasurer, A. E. McKenna; executive committee—H. F. Elsom, Alice Balfrey and Austin Elliott.

#### Unfilled Orders For Woven Goods Continued To Decline In September

Unfilled orders at the end of September for cotton fabrics continued to decline at weaving mills, finishing plants and converters. Cotton greige goods inventories at weaving mills and finishing plants increased, while converter-owned greige goods showed a decline. Converter-owned finished goods inventories increased.

Inventories of greige synthetic fabrics owned by weaving mills increased during the month as did their holdings of fabrics that had been billed to the customer.

Converters unfilled orders for synthetic fabrics declined as did their holdings of finished goods.

Wool apparel fabric inventories (both greige and finished) at weaving mills declined from August to September. Unfilled orders for finished goods also decreased.

Weaving mill weekly average production for cotton, syn-

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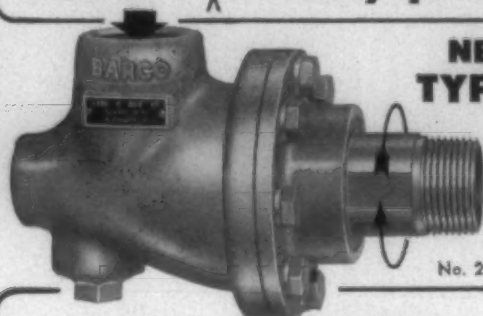
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thetic and wool fabrics declined 4% from August to September. Production of wool greige goods declined 10% while synthetic fabric output dropped 2% and cotton fabric production declined 4%.

Weekly average production of finished cotton whites and plain colors declined 2% from August to September, while weekly average production rose 4% for finished synthetic and silk fabrics. All figures are from the Bureau of the Census.

**Weaving Mills Activity — September 1960**

|                  | Weekly Average<br>Production<br>(thousands of linear yards) |         | Unfilled Orders<br>at Months End |           |
|------------------|-------------------------------------------------------------|---------|----------------------------------|-----------|
|                  | Sept.                                                       | Aug.    | Sept.                            | Aug.      |
| Greige Goods     |                                                             |         |                                  |           |
| Total            | 222,770                                                     | 231,122 | 2,279,989                        | 2,399,345 |
| Cotton Greige    |                                                             |         |                                  |           |
| Goods            | 175,701                                                     | 182,780 | 1,797,562                        | 1,919,021 |
| Synthetic Greige |                                                             |         |                                  |           |
| Goods            | 41,573                                                      | 42,238  | 479,618                          | 477,282   |
| Silk Greige      |                                                             |         |                                  |           |
| Goods            | 533                                                         | 562     | 2,809                            | 3,042     |
| Wool Apparel     |                                                             |         |                                  |           |
| Fabrics          | 4,963                                                       | 5,542   | (NA)                             | (NA)      |

**Charlotte Textile Club Elects  
Stickley As President For 1961**

John L. Stickley of John L. Stickley & Co., Charlotte, has been named president of the Charlotte Textile Club for 1961. Stickley, former first vice-president, succeeds Herbert M. Woodward, Southeastern Factors Corp., Charlotte.

Other officers are: James L. Teat of Southeastern Engineering Co., Charlotte; Julian Rivers, J. P. Stevens & Co., second vice-president; M. H. Ridenhour, Terrell Machine Co., Charlotte, secretary and treasurer.

Named to the board of the club were Joseph L. Wright, Johnston Mills Co., Charlotte; William S. Holt Jr., Mooresville (N. C.) Mills; Thomas Ingram, North Carolina Textile Manufacturers Association, Charlotte; E. Waring Best, Celanese Corp. of America, Charlotte; and George E. Zeigler Jr., The Kendall Co., Charlotte.

**N. C. State College To Continue Its  
Work In Peru For Another Three Years**

North Carolina State College will continue its agricultural research contract in Peru for another three years. Under the three-year contract which terminated with the end of 1960, the college, through its School of Textiles, helped establish a textile institute as a part of the National University of Engineering at Lima, Peru. The contract was made through the International Co-Operation Administration as part of the Point Four program.

**Durene Association Of America  
Elects New Officers For 1961**

Freeman R. Harris, vice-president of Standard-Coosa-Thatcher Co. of Chattanooga, Tenn., has been elected president of the Durene Association of America at its annual meeting. He replaces R. D. Hall Jr., of the American Thread Co., New York City, retiring president.

Others elected at the meeting at the St. Moritz Hotel were vice-president, Milton Meyers; and treasurer, W. H. McDonald. Meyers is president of Clarence L. Meyers & Co., Philadelphia. McDonald is vice-president and treasurer of Southern Mercerizing Co., Tryon, N. C. A. C. Layton Newsom was re-elected executive secretary.

Both advertising and promotion will be intensified during

1961. Special emphasis will be given to "point of sales" merchandising, Newsom said.

Member firms of the Durene Association of America include: Aberfoyle Mfg. Co.; American & Efrid Mills Inc.; The American Thread Co.; Boger & Crawford Inc.; Dixie Mercerizing Co.; Spinners Processing Co.; and Standard-Coosa-Thatcher Co.

## November Cotton Consumption Down

Total cotton consumption in the U. S. was down again in November after showing a drop in October. The November total of 644,356 bales was below both the October total and that for November of 1959. The following charts from the Bureau of the Census summarize cotton system activity for November.

### Consumption, Stocks And Spindle Activity of Cotton System

| ITEM                                                                            | November 1960 | October 1960 | November 1959 |
|---------------------------------------------------------------------------------|---------------|--------------|---------------|
| <b>ALL COTTON (Running bales)</b>                                               |               |              |               |
| Total Consumption                                                               |               |              |               |
| United States                                                                   | 644,356       | 666,819      | 725,482       |
| Cotton-Growing States                                                           | 620,753       | 641,018      | 698,593       |
| New England                                                                     | 20,703        | 23,063       | 24,081        |
| Daily Average Consumption                                                       |               |              |               |
| United States                                                                   | 32,218        | 33,341       | 36,274        |
| Cotton-Growing States                                                           | 31,038        | 32,051       | 34,930        |
| New England                                                                     | 1,035         | 1,153        | 1,204         |
| Index for cotton consumption adjusted for seasonal variations (1947-1949 = 100) | 91            | 94           | 102           |
| Stocks, Total                                                                   | 13,443,573    | 11,063,884   | 15,499,110    |
| Consuming Establishments                                                        | 1,282,424     | 1,053,326    | 1,263,565     |
| Public Storage                                                                  | 12,161,149    | 10,010,558   | 14,235,545    |
| Exports                                                                         | (NA)          | 438,815      | 651,334       |
| <b>FOREIGN COTTON (Equivalent 500 lb. gross weight bales)</b>                   |               |              |               |
| Total Consumption                                                               | 7,707         | 7,775        | 8,258         |
| Stocks                                                                          | 85,399        | 88,733       | 78,764        |
| Imports                                                                         | (NA)          | 1,397        | 216           |
| <b>MAN-MADE FIBER STAPLE (Thousand pounds)</b>                                  |               |              |               |
| Total Consumption                                                               | 36,295        | 36,899       | 39,106        |
| Stocks                                                                          | 42,344        | 42,191       | 47,407        |
| Imports                                                                         | (NA)          | 4,139        | 8,593         |
| <b>COTTON-SYSTEM SPINDLES</b>                                                   |               |              |               |
| In Place (thousands)                                                            | 19,951        | 19,958       | 20,317        |
| Active (thousands)                                                              | 19,151        | 19,241       | 19,308        |
| Hours Operated (millions)                                                       | 8,923         | 9,204        | 9,880         |

NA—Not Available

### Cotton System Spinning Spindles — November

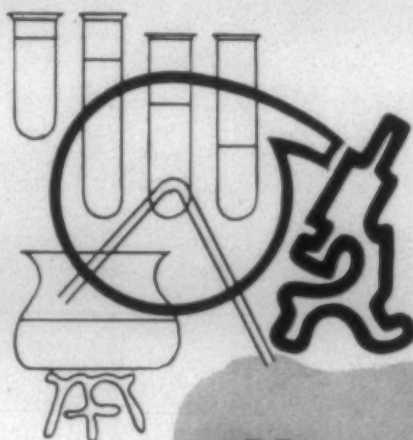
| AREA AND STATE               | Consuming 100 % Cotton        |                                                 | Consuming Other Than Cotton   |                                                 |
|------------------------------|-------------------------------|-------------------------------------------------|-------------------------------|-------------------------------------------------|
|                              | Active Nov. 26, 1960 (thous.) | Spindle hours operated during period (millions) | Active Nov. 26, 1960 (thous.) | Spindle hours operated during period (millions) |
| <b>UNITED STATES, Total</b>  | 17,507                        | 8,178                                           | 1,644                         | 745                                             |
| Cotton-Growing States        | 16,271                        | 7,698                                           | 1,518                         | 700                                             |
| Alabama                      | 1,466                         | 672                                             | 34                            | 11                                              |
| Georgia                      | 2,633                         | 1,232                                           | 164                           | 80                                              |
| North Carolina               | 4,919                         | 2,272                                           | 640                           | 312                                             |
| South Carolina               | 5,941                         | 2,964                                           | 633                           | 283                                             |
| Tennessee                    | 418                           | 196                                             | 28                            | 9                                               |
| Texas                        | 209                           | *                                               | *                             | *                                               |
| Virginia                     | 543                           | *                                               | *                             | *                                               |
| Other States                 | 142                           | 55                                              | 8                             | 2                                               |
| <b>New England</b>           | 1,164                         | 466                                             | 107                           | 39                                              |
| Connecticut                  | 66                            | *                                               | *                             | *                                               |
| Maine                        | 348                           | 134                                             | 5                             | 1                                               |
| Massachusetts                | 425                           | 161                                             | 69                            | 24                                              |
| Rhode Island                 | 229                           | 100                                             | *                             | *                                               |
| Other States                 | 96                            | *                                               | *                             | *                                               |
| <b>Rest of United States</b> | 72                            | 14                                              | 19                            | 6                                               |
| New York                     | 18                            | 2                                               | *                             | *                                               |
| Other States                 | 54                            | 12                                              | 19                            | 6                                               |

\*Cannot be shown separately. Included in United States and area totals.

## Production Of Broad Woven Cotton Down 10% In Third Quarter Of 1960

Cotton broad woven fabric production in the third quarter of 1960 was approximately 10% below the previous quarter and 8% below the third quarter 1959 level.

Production of each of the major fabric classes declined from the previous quarter's level. The percentage decline varied



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## Reduces Shedding and Breaks in Slashing

Moretex B-30 is a water emulsion of natural esters and a low molecular weight polyethylene. It combines the properties of binding, lubrication, plasticizing, and abrasion resistance and improves the film forming qualities of CMC. Moretex B-30 provides a minimum of shedding, fiber breaks, clinging, and other undesirable occurrences.

Moretex B-30 is dispersible in water at any temperature and can therefore be added at any stage of the mixing operation. Being non-colloidal it will not split out in high speed cookers. Its use will not interfere with any subsequent finishing operations. Moretex B-30 is freeze-thaw stable and remains stable in long storage.

Applications: For cotton and synthetics and for cold bath application on certain filaments. In most size baths it is being used with our Moretex B-75 and Moretex TS-75 which is a dry binder.



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from 7 to 20%. Compared to the comparable period of 1959, production of fine cotton fabrics increased 2% while other fabric classes declined 6 to 18%.

Production of cotton fabrics in the Southern states amounted to 2,033 million linear yards. This was 9% below the second quarter output. The New England production was 11% below the output of the previous quarter.

**Summary Of Production By Class Of Fabric**

| TYPE OF GOODS                                         | (Thousands of linear yards)             |                        |                        |
|-------------------------------------------------------|-----------------------------------------|------------------------|------------------------|
|                                                       | (preliminary)<br>July-<br>Sept.<br>1960 | April-<br>June<br>1960 | July-<br>Sept.<br>1959 |
| Total                                                 | 2,191,550                               | 2,421,639              | 2,371,539              |
| Cotton Broad Woven Goods,<br>Duck and allied fabrics  | 48,183                                  | 52,604                 | 54,230                 |
| Sheeting and allied coarse<br>and medium yarn fabrics | 578,603                                 | 662,482                | 659,769                |
| Print cloth yarn fabrics                              | 779,202                                 | 843,043                | 831,762                |
| Colored yarn fabrics                                  | 105,179                                 | 117,090                | 127,522                |
| Towels, toweling and dishcloths                       | 129,996                                 | 139,504                | 138,661                |
| Napped fabrics, blankets<br>and blanketing            | 45,915                                  | 57,509                 | 50,815                 |
| Fine cotton fabrics                                   | 394,546                                 | 430,899                | 387,937                |
| Other woven cotton fabrics<br>and specialties         | 109,926                                 | 118,508                | 120,843                |

**Man-Made Fiber Fabric Production  
Shows 8% Drop In Third Quarter**

Production of broad woven goods of man-made fibers was 569 million linear yards during the third quarter of 1960. This was 8% below the second quarter output and 7% below the third quarter 1959 output. Rayon and acetate fabric production was 8% below the output during the previous quarter, and 15% less than the output during the comparable period of 1959.

Man-made fiber fabrics in the South decreased 7% compared to the previous quarter while output in New England plants decreased 8%. Output in the Middle Atlantic states declined 11%.

**Summary Of Production By Class Of Fabric**

| TYPE OF FABRIC                                                  | (Thousands of linear yards) |                        |                        |
|-----------------------------------------------------------------|-----------------------------|------------------------|------------------------|
|                                                                 | July-<br>Sept.<br>1960      | April-<br>June<br>1960 | July-<br>Sept.<br>1959 |
| Man-Made Fiber Fabrics, Total                                   | 568,999                     | 615,448                | 612,564                |
| Rayon and Acetate Broad<br>Woven Fabrics, Total                 | 334,835                     | 367,260                | 391,940                |
| Blanketing                                                      | 11,567                      | 13,636                 | 15,228                 |
| 100% filament rayon<br>and/or acetate fabrics                   | 153,105                     | 164,126                | 168,889                |
| 100% spun rayon and/or<br>acetate fabrics                       | 52,355                      | 56,358                 | 65,941                 |
| Combination filament and spun rayon<br>and/or acetate fabrics   | 23,836                      | 26,888                 | 27,564                 |
| Pile, upholstery, drapery, tapestry<br>and tie fabrics          | 43,831                      | 45,542                 | 47,471                 |
| And other rayon and/or<br>acetate mixtures                      | 50,141                      | 60,710                 | 66,847                 |
| Man-Made Fiber Fabrics,<br>Except Rayon and Acetate             | 224,342                     | 237,300                | 209,275                |
| Silk and Other Broad Woven<br>Fabrics, Not Elsewhere Classified | 9,822                       | 10,888                 | 11,349                 |

**October Weekly Average Production  
Of Sales Yarn Down From September**

Sales yarn production in October averaged 14.5 million pounds per week compared to the weekly average production of 14.2 million pounds in September and 15.3 million pounds in August, according to the Bureau of the Census. Weekly average knitting yarn output in October amounted to 7.5 million pounds while other sales yarn production averaged 7.0 million pounds.

Wool sales yarn output in October averaged 2.0 million pounds. This was approximately equal to the rate of output in September. Spun synthetics sales yarn produced on the woolen and worsted systems in October averaged 16% above the September level.

Carded cotton sales yarn production in October averaged



6.8 million pounds per week or 1% below the September level. Production of combed cotton sales yarn increased 5% during these periods.

**Weekly Average Production Of Spun Yarn For Sale**  
(Thousands of pounds)

| ITEM                                  | Oct.   | Sept.  | Aug.   |
|---------------------------------------|--------|--------|--------|
| Spun yarn for sale, Total             | 14,473 | 14,190 | 15,294 |
| Knitting                              | 7,514  | 7,438  | 8,396  |
| Weaving, tufting and other            | 6,959  | 6,752  | 6,899  |
| Carded cotton, Total                  | 6,838  | 6,920  | 7,306  |
| Knitting, white                       | 2,732  | 2,777  | 3,040  |
| Weaving, white                        | 1,694  | 1,747  | 1,717  |
| Other carded                          | 2,412  | 2,396  | 2,548  |
| Combed cotton, Total                  | 4,516  | 4,316  | 4,442  |
| Knitting                              | 2,519  | 2,379  | 2,511  |
| Mercerizing (knitting)                | 570    | 592    | 606    |
| Thread                                | 734    | 701    | 688    |
| Other combed                          | 693    | 644    | 637    |
| Wool, Total                           | 1,966  | 1,957  | 2,174  |
| Knitting, woolen system               | 182    | 200    | 303    |
| Knitting, worsted system              | 712    | 746    | 864    |
| Weaving, woolen system                | 17     | 17     | 13     |
| Weaving, worsted system               | 110    | 112    | 144    |
| Carpet and rug, woolen system         | 945    | 882    | 849    |
| Spun synthetics, Total                | 1,152  | 997    | 1,373  |
| Knitting, woolen system               | 62     | 34     | 45     |
| Knitting, worsted system acrylic      | 709    | 684    | 987    |
| Knitting, worsted system, other fiber | 28     | 26     | 38     |
| Carpet and rug, woolen system         | 121    | 100    | 92     |
| Carpet and rug, woolen system         | 232    | 153    | 210    |

### Markem Machine Co. Looks For Oldest Machine Still In Service

Markem Machine Co., Keene, N. H., is making a cash offer of twice the original price of the machine for the oldest Markem marking machine still in service. The winning company and machine will be featured in Markem's publicity program.

The machine, which must be in running order and at least in limited service, could be as old as 50 years, since Markem machines were put on the market in 1911. The company said the machine it is looking for is probably in use today as a fabric marker, production or payroll tag marker, ink or leaf embosser, fabric label printer, or as a carton or box stamper.

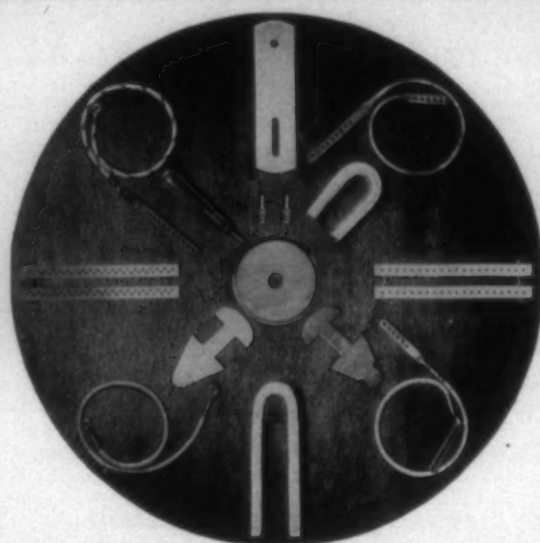
### Carded Yarn Association Names Committee Chairman For 1961

Chairmen of 1960-1961 operating committees of the Carded Yarn Association have been announced by President O. Leonard Moretz, president and treasurer of Carolina Mills, Maiden, N. C. The committeemen will serve terms corresponding to Mr. Moretz' tenure as chief executive of the association of sales yarn mills.



Moretz

The appointments include: *Audit & budget*, J. Boyce Choate, Choate Mfg. Corp., Charlotte, N. C.; *continuing services*, B. D. Banks, Habersham (Ga.) Mills; *foreign relations*, W. R. Austin, Avondale Mills, Sylacauga, Ala.; *membership* (zone chairmen), R. L. McCommon Sr., Atlantic Cotton Mills, Macon, Ga., Ernest Rees Jr., Elk Cotton Mills, Fayetteville, Tenn., and J. L. McInnis, Harriet-Henderson Mills, Henderson, N. C.; *nominating*, J. A. Conner, Hyde Park Mills, Covington, Tenn.; *public relations*, G. P. Barnwell, Bibb Mfg. Co., Macon, Ga.; and *joint rules committee* representatives, E. N. Brower Sr., Brower Mills, Hope Mills, N. C., and D. R. LaFar Jr., LaFar Mills, Gastonia, N. C. The joint rules committee is composed of two representatives each from the Carded Yarn Association, the Combed Yarn Spinners Association and the Association of Yarn Distributors.



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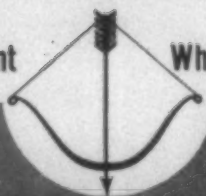
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Adjustable Loom Beam Heads

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## Production-Mechanization Conference

(Continued from Page 36)

ishes demand stronger fabric and yarns. It has been found that a Pressley strength reading of approximately 80,000 p.s.i. generally is satisfactory for most fabrics. To obtain these specifications, the buyer must state exactly what he wants in a cotton to both the growers and the shippers.

A catch-all category for cotton fibers is the fifth property. Designated as the "uncontaminated" group, it means that the fibers are free from the harmful effects of disease, insect damage and contaminating sprays. These include the Cavitoma fungus, Honey Dew excretions of the insects, defoliant, additives and oils from the pickers and ginner.

Research at the seed breeder level, proper selection of seeds by the farmer, improved harvesting techniques and controlled ginning can control the four elements, according to Dent.

## Spinning Frame Maintenance

(Continued from Page 46)

morning the head overhauler is given a list of the frames to be worked on and the type of work to be done.

*Mill I:* A maintenance record book is kept wherein all pertinent information is recorded.

*Mill J:* Record is made and kept by head overhauler of every job done by roll scrubbers and overhaulers.

*Mill K:* The number of hours run per week is posted on an individual sheet for each frame. All cleaning and overhauling is posted on this sheet. A card is kept for each frame and posted as to type of work performed and the date the work was done. Trial parts installation and running records are also kept on the sheet.

*Mill L:* We keep a maintenance book with a page for each frame. Records of all new parts, aprons, etc., are kept in this book.

*Mill M:* We keep records showing when frames were overhauled, lined and levelled; spindles plumbed; spindles oiled or flushed and re-filled; steel rolls oiled and top rolls oiled.

*Mill N:* We keep a file card on each frame.

*Mill O:* Our records contain frame number, date of roll scrubbing and apron replacement, date of top roll buffing, date and names of gears replaced, date of reworking of steel roll joints and bad lever screws, date of spindle oiling, and date of spindle plumbing.

*Mill P:* A card showing frame number, date of overhaul, department, and parts used is filled out when machine is overhauled. A monthly report is made, based on data from these records. We also use a board listing all frames and on which a tag is placed as machines are overhauled.

## S.T.A. Discussion

(Continued from Page 53)

area has been overdried. Our checks show it has less than 4% moisture in it when we receive it. I think you should add a little moisture to it to keep from breaking fibers.

*Mill G:* That's exactly right.

## Do you use a spray on your cotton?

*Moderator:* Do any of you use a spray on your cotton? What good does it do?

*Mill A:* Are you talking about oils or other types of sprays?

*Moderator:* I'm talking about all of them.

*Mill A:* It's like the fellow who has a head of hair and it gets dry; he has to put something on it to slick it down. The oil has the same effect on the cotton. It controls the fibers.



Promotions, Resignations, Honors,  
Transfers, Appointments, Elections,  
Civic and Associational Activities

## PERSONAL NEWS



Hilley

Paul E. Hilley has been appointed by Coats & Clark Inc., New York City, to head its spinning mills. He succeeds Albert C. Gray, who has retired. In his new position, Hilley will direct the activities of the firm's four Georgia mills. In 1959, Hilley was sent to New York headquarters to train in preparation for his subsequent appointment as assistant manager of Southern mills. He has been in the thread industry since 1932, when he was hired by Coats & Clark's Clarkdale, Ga., plant as a machine cleaner. He subsequently has held various capacities in the organization's plants.

Hans E. Runge is retiring as executive vice-president of Abney Mills, Greenwood, S. C. Runge will continue to serve on the board of directors. He joined Abney in 1926 as superintendent of the Grendel Mill in Greenwood. From 1917 to 1922 he was with the Trion (Ga.) Co., now a part of Riegel Textile Corp. And from 1922 to 1926 he was with the Draper Corp.

Eugene T. Barwick, founder of the E. T. Barwick Mills of Georgia, has been named to the Silver Anniversary All-America Team by *Sports Illustrated*. Barwick, a former University of North Carolina varsity football player, was one of 25 players chosen by the magazine. To be nominated by his school, a man must have been a senior on the 1935 varsity football squad and 25 years later have shown the greatest accomplishments in public service in his career.

Dr. Lyman E. Fourt, assistant director of the Harris Research Laboratories of Washington, D. C., has been named to receive the Harold Dewitt Smith Memorial Award given by the American Society for Testing Materials. The award will be presented at the Sheraton-Atlantic Hotel, New York City at the Spring meeting of Committee D-13. It is awarded yearly by the society for outstanding achievement in the science of textile fiber utilization.

H. Paul Bridges has been named general manager of the Cliffside, N. C., plant of Cone Mills Corp. A 1935 graduate of Clemson College with a B.S. degree in textiles, Bridges has been at the Cliffside plant since 1938. He has served successively as designer, assistant superintendent and superintendent. . . . Gordon D. Williams has been named assistant to the general manager. Williams

joined Cone in 1949. . . . Frank B. Whitaker has been named superintendent of the plant. He started as a weaver with the Cliffside plant in 1933 and has served successively as assistant designer and production man, assistant overseer of finishing and as overseer of finishing. . . . James L. Padgett has been named manager of designing, production planning and testing. Padgett has been designer at the plant since 1947. . . . Joe L. Swing has been named assistant superintendent at Cliffside. He joined the plant in 1943 and has served as production man, assistant overseer of spinning and assistant to the superintendent.

James L. Morgan, great-grandson of the founder of Morgan Mills, Laurinburg, N. C., has been named president of the firm. He succeeds his father, Edwin Morgan, who has been president since 1916. The elder Morgan will continue with the firm as chairman of the board.



Brooks

Lamont Brooks has been appointed salesman for the Southern States Equipment Corp., Hampton, Ga. He will cover an area for the company in the state. Brooks, who has been employed by the Southern States company for the last seven years, has also worked in production, sales and engineering of the firm.

D. O. Carpenter has retired as manager of the Oakland Plant of The Kendall Co. in Newberry, S. C. He has been with the company for 36 years and has held the position of manager since 1935. L. H. Jordan has succeeded Carpenter as manager of the plant. He joined the company in 1926 and has held supervisory positions in several of Kendall's plants.

Harold P. Phillips, superintendent and member of the management committee of Craftspun Yarns Inc., Kings Mountain, N. C., has resigned to join the Southern Yarn Sales Co., Anderson, S. C. He joined the firm in 1932 while the company was under another name and management. He is a graduate of the N. C. Vocational School at Belmont, N. C., and studied cotton classing at Clemson College and time study at N. C. State College.

Robert Eltonhead has joined the Althouse Chemical Co., Reading, Pa., as a member of the research staff. He graduated from the

Drexel Institute of Technology and has had more than 20 years of experience in the field of organic chemistry. . . . Norman Price has been appointed to the sales staff and will cover the Tennessee area. Price comes to Althouse with 20 years experience in the field of dyestuff applications to textiles.



Wood

Carroll Wood has joined Dixon Corp., Bristol, R. I., as a field service engineer for South Carolina. He has been connected with the spinning industry since 1928. From 1951 to 1956 he was spinning overseer for Limestone Mfg. Co., Gaffney, S. C. He left this to work for a spinning frame manufacturer as chief erector, installing drafting changeovers, spindles, creels, etc. In 1959, he returned to the manufacturing field as head maintenance man at Musgrove Mill, Gaffney.

Stanley Martin has been promoted to the position of general manager of Commander Mills Inc., Sand Springs, Okla. Walter E. Ellenburg of Spartanburg, S. C., formerly with Reeves Bros. Inc., has replaced Martin as superintendent of the mill.

J. Gray Commins, formerly head of the electric blanket mills of Fieldcrest Mills, has been named executive vice-president of Northern Electric Co. Commins joined Northern Electric in 1955. He is a graduate of Georgia Tech with a degree in textile engineering.

R. B. Park has been appointed sales manager of the industrial rubber and mechanical packings line of Raybestos-Manhattan Inc., Passaic, N. J. Park was formerly assistant sales manager of these activities. He joined the firm in San Francisco in 1954. . . . R. B. Hazard, previously vice-president and sales manager of the industrial rubber and mechanical packings line, has been appointed vice-president of sales for these sales divisions of Raybestos-Manhattan. He was elected a director in 1960.

Three new manufacturing division presidents have been appointed by Deering Milliken Inc. Alan B. Sibley was named to head the fine goods manufacturing division. These plants are Judson Mills, Greenville, S. C.; Gerrish Milliken Mill, Pendleton, S. C.; Kingsley Mill, Thomson, Ga.; and Machias Mill, Machias, Me. . . . George Asnip was named president of the worsted manufacturing division with plants at Abbeville, S. C.,



## PERSONAL NEWS

McCormick, S. C., Johnston, S. C., and Pendleton, S. C. . . . Joseph E. Meehan becomes president of the woolen manufacturing division, which operates Excelsior Mills, Union, S. C., and Rutherfordton, N. C.; Hatch Mill, Columbus, N. C.; Cowan Mill, Lewiston, Me.; Farnsworth Mill, Lisbon Center, Me. Meehan is also treasurer of the Kingstree (S. C.) Mfg. Co.

Dr. Earl Berkley has joined the cotton department of the Deering Milliken Service Corp., Spartanburg, S. C. Formerly a director of the fiber testing and research laboratory of Anderson, Clayton & Co., Berkley is a graduate of the University of West Virginia.

Richard G. Adams has been named head of fiber glass research for the J. P. Stevens' Central Research Laboratories in Garfield, N. J. Prior to joining the company, Adams was associated with Esso Research & Engineering Co. Here he did applications research on hydrocarbon thermo-setting resins. He acquired his fiber glass experience with Owens Corning Fiberglas from 1950 to 1958. Adams is a member of the Society of Plastics Engineers and has been active in the Reinforced Plastics Division of The Society of Plastics Industry.



Olsen

Herbert C. Olsen has been appointed manager of textile service and development for National Starch & Chemical Corp., New York City. Olsen joined National upon graduation from Lowell Technological Institute as a textile chemist in 1939. He is an author of numerous technical articles and a frequent speaker before technical groups in the textile industry. He will continue to make his headquarters in Plainfield, N. J.

Chase Wilson has been promoted to assistant overseer of Hillside rawstock dyeing for Callaway Mills Co., LaGrange, Ga. He joined the company in 1952, first at the Valway plant and later transferred to Hillside.

Norman A. Cocke Jr. has been named manager of sales service of the fibers division of the American Viscose Corp., Philadelphia, Pa. In the newly created position, Cocke will be in charge of fiber sales programming, including the co-ordination between sales and production, the development of marketing plans and the supervision of technical services for customers. He joined the company in 1939 as a salesman in the Charlotte, N. C., office and held the position of textile products manager until his promotion.

Richard M. Mitchell Jr. has been named manager of Cone Mills Corp.'s Tabardrey Plant at Haw River, N. C., succeeding Arthur Makin, who has retired. Mitchell received a B. S. degree in commerce from the University of North Carolina in 1938 and last year completed the Executive Program at the University. He did apprentice work in the plant's supply room from 1938 to 1941; he worked in the sample, weaving and time study departments from 1948 to 1951. . . .

James M. Ward has replaced Mitchell as assistant manager of the plant. Ward, a graduate of N. C. State College in 1952, was in the cost accounting department from 1952 to 1954 in Greensboro, N. C. Since 1954 he has been in quality control.



Jones

William H. Jones has been appointed assistant Southern manager of the Carbic-Hoechst Corp., Southern district office, Charlotte, N. C. Prior to joining Carbic in 1947, Jones was associated with the Clearwater (S. C.) Finishing Co., Davis Mills Corp., Fall River, Mass., and Arnold Print Works, North Adams, Mass. In addition to his new duties Jones will continue to call on textile finishing plants in North and South Carolina.

Herbert H. Jones has been promoted from trainee to plant engineer at the Calumet Plant of Callaway Mills Co., LaGrange, Ga. Jones joined the company in June of 1960 after graduating from Auburn where he received a Bachelor of Science degree in mechanical engineering. . . . Buford Carter Jr. has joined the company as trainee at the mechanical laboratory in the research and development division. He graduated in December from Georgia Tech with a degree in electrical engineering. . . . Donald G. Skinner has joined the company as a trainee at the Calumet Plant. He is a 1957 graduate of Auburn with a degree in chemistry.

J. B. Harris Jr., vice-president of Greenwood (S. C.) Mills, has been named president of the Greenwood Chamber of Commerce for 1961.

Arthur B. Edge III has been named administrative assistant to the plant manager of the Hillside Plant of Callaway Mills Co., LaGrange, Ga. Prior to his appointment, Edge was superintendent of the mill. . . . H. H. Lewis was named to superintendent to succeed Edge. He is returning to Callaway after working with the Doerr Carpet Co., Cartersville, Ga.

T. H. Holcomb has been named superintendent of Fayette (Ala.) Cotton Mill succeeding V. S. Nelson who has resigned. Holcomb will continue to serve as superintendent of Winfield (Ala.) Cotton Mill. The operation of the two mills was taken over by Union Underwear Co. in 1959. They formerly were owned by Dan River Mills.

Ellsworth H. Sears has been named manager of the industrial engineering department at Draper Corp.'s Spartanburg, S. C., plant. Sears was recently transferred from the Draper main plant in Hopedale, Mass. to the East Spartanburg plant. Sears joined Draper in 1939 as a member of the research department and was later transferred to the planning and industrial engineering departments, a position he held until receiving the present appointment. . . . Charles O. Hearon Jr., has been named personnel manager at the plant. Hearon joined Draper in 1953 at the Spartanburg warehouse and was promoted to the position of foreman and assistant manager of the warehouse. In

1958, he joined the purchasing staff at the East Spartanburg plant and in 1959 he was promoted to assistant purchasing agent. . . . W. D. Hightower has been named to succeed Hearon in his duties in the purchasing department. Hightower joined Draper in 1941. In June 1951, he became a member of the purchasing department and in January 1960, he was promoted to buyer.

Zeb V. Simmons has been named general overseer of spinning and synthetic preparations of Mayo (S. C.) Mills. Simmons was formerly with Reeves Bros., United Merchants & Manufacturers, Borden Mills and J. P. Stevens & Co. . . . Eddie W. Nodine has been named general overseer of carding. His previous associations include Reeves Bros. and Arkwright Mills. Mayo Mills is a division of Massachusetts Mohair Plush Co., which is a part of Horvath Industries.



Parker

Carroll C. Parker has joined the sales department of Curtis & Marble Machine Co., Worcester, Mass. Parker has been previously connected with the U. S. Rubber Co. for 20 years in development, production, sales engineering and as a commodity sales manager in Passaic, N. J., and Fort Wayne, Ind. Later he was vice-president—sales for Acme Abrasive Co. of Detroit.

James L. Goldsmith has been named superintendent of the Oakland Plant of The Kendall Co., Newberry, S. C. Goldsmith was formerly overseer of weaving at the company's Albertville, Ala., plant. . . . E. T. McClure, formerly superintendent of the Oakland Plant, has been named manager of the Albertville facility.

Several promotions have been made at Gambrill & Melville Mills, Bessemer City, N. C. G. E. Hoyle has been named first shift foreman of the weave room. . . . Eugene Isenhour has been named second shift foreman of the weave room. . . . Frank Shuford has been promoted to master mechanic.

A. L. Jackson has been named acting manager of the bedspread mill of Fieldcrest Mills, Leaksville, N. C. Jackson will continue in his position as assistant to the vice-president of manufacturing. . . . Frank E. Barron, superintendent of the bedspread mill, has been promoted to assistant manager. A textile engineering graduate of Clemson College, Barron joined Fieldcrest in 1951. . . . W. Giles Hunnings was promoted to superintendent of the bedspread mill. . . . Joseph P. Foster has been named superintendent in charge of the bedspread finishing mill. . . . Dillard M. Powell, assistant to the superintendent of the sheeting mill, has been named assistant superintendent.

R. J. Woodford, production superintendent at Goodyear Tire & Rubber Co.'s Gadsden, Ala., plant has been appointed manager of interplant relations. Woodford succeeds L. A. Hurley who has retired. As manager of interplant relations Woodford will be responsible for the channeling of materials and technical aid and information

from the Akron headquarters to the various Goodyear plants throughout the world.



Newell

William A. Newell has assumed his duties as manager of product planning for Whitin Machine Works, Whitinsville, Mass. In this new position, he will be responsible for product evaluation, product line management and development, liaison with research and engineering, price-cost relationships and mill surveys. Since 1952 he has been director of the Textile Research Center at the School of Textiles, N. C. State College in Raleigh, N. C. Under his direction, the research center prospered and grew to be the world's largest operation of this kind connected to an institution. Newell graduated from the University of Massachusetts and N. C. State College. He is a member of the American Association of Textile Technologists. He has served on the Association's Board of Governors and is currently a member of its technical committee. . . . John H. Osgood has joined the staff of the research division of the firm as director of development. In this newly created position, Osgood will have the responsibility of taking new machinery prototypes approved by the research department and finalizing their design and construction ready for full production. A graduate of the University of New Hampshire with a B. S. Degree in Mechanical Engineering, he was formerly associated with the Jones & Lamson Co., Springfield, Vt., as manager of engineering for the firm's tool thread division. He is vice-chairman of the Northern New England section of the American Society of Mechanical Engineers and a member of the National Society of Professional Engineers.

J. O. Lindsey, general manager of the Lyman (S. C.) Printing & Finishing Co., was recently honored as Boss of the Year by the Greer (S. C.) Junior Chamber of Commerce. Lindsey also received a certificate of appreciation for his contributions to Greer Jaycee activities.



Koepcke

Albert F. Koepcke, formerly director of industrial and public relations and advertising for Saco-Lowell Shops, has been named vice-president in charge of employee relations of the automotive division of the Budd Co., Detroit, Mich. In his new post Koepcke rejoins Thomas J. Ault, former president of Saco-Lowell and now president of the Budd Co.'s automotive division.

Vaughan E. West has been named treasurer of Whitin Machine Works. In this capacity, he will be responsible for all financial and accounting operations of the company. West joined Whitin in late 1960 as assistant treasurer. He was previously associated with the management consultant firm of Booz, Allen & Hamilton, New York City. . . . Norman F. Garrett, executive vice-president of Whitin has been elected

to the company's board of directors. Garrett joined the Whitin organization in September 1959 as general manager of the Whitinsville Division. He was later made a vice-president and in September 1960 was named executive vice-president.

W. H. Rawlings and A. Ward Peacock have been named to positions of added responsibility by Erwin Mills, Durham N. C. Rawlings has been named assistant vice-president—sales. He will continue as manager of the cost control section and as assistant to the president in the function of finished goods inventory planning and control. Peacock was named assistant treasurer in addition to being secretary, a position he has held since 1958. Rawlings joined Erwin in 1949 and was made manager of the cost accounting department in 1953. He was promoted to assistant treasurer in 1957 and was recently appointed assistant to the president in the function of finished goods inventory planning and control. Peacock joined the company in 1952. He served as an executive assistant until his election as secretary of the company.



Hindle

Walter H. Hindle has been elected a Fellow of The Society of Dyers & Colourists of England. This is an honor conferred by the society for major contributions in the fields of dyeing and finishing technology. Hindle is president of Walter H. Hindle Inc., fiber development consultants of New York City.

James F. McGann has joined the Archer-Daniels-Midland Co.'s development department in Minneapolis, Minn., as a market development chemist. McGann will work on the development of new markets for A. D. M.'s fatty nitrogen chemicals in the textile field and other industries. Before joining the company he was senior development chemist for Atlas Powder Co. and had been associated with that firm for six years in chemical engineering and development capacities. McGann is a member of the American Chemical Society and the American Association of Textile Chemists & Colorists.

Ferdinand M. Johnson of Greensboro, N. C., has rejoined the Whitin Machine Works as product manager for woolen and worsted machinery. He will fill the vacancy in the company's marketing department resulting from the recent resignation of Fred Tattersall. Johnson first became associated with Whitin in 1935 as a research technician. In 1948 he left Whitin to become associated with the Pacific Mills organization. He worked with them in a supervisory capacity in Rhodhiss, N. C., and at Lyman, S. C. For the last two and one-half years he has been associated with Cone Mills Corp., research and development division, Greensboro, N. C.

Robert M. Tong has been appointed general sales manager of Manufacturers Chemical Co., Camden, N. J. Tong was formerly with General Latex & Chemical Corp. The company reports that he has had extensive experience in textile chemical and resin sales and new product development.

## OBITUARIES

**John Nelson Badger**, 90, died in a Greenville, S. C., hospital on December 22, 1960, after an illness of approximately three months. Mr. Badger was superintendent of Victor-Monaghan Mill from 1916 to 1918, when he resigned to become superintendent of Dunean Mills. He remained there until 1925, when he became associated with the Langley Mills. He remained there until his retirement in 1932. Surviving him are two daughters and three sons.

**James E. Barksdale**, 57, died December 19, 1960, in a Winston-Salem, N. C., hospital. Mr. Barksdale was manager of the bedspread and finishing mills of Fieldcrest Mills, Leaksville, N. C. His survivors include his wife and one daughter.

**Robert Lee Floyd**, 50, former superintendent of Union Buffalo Mills, Union, S. C., died January 9 in a Columbia, S. C., hospital. His widow, two sons and three daughters survive.

**Lawrence C. Groves**, 66, former chairman of the board of Groves Thread Co., Gastonia, N. C., died January 6, 1961. He was with the firm until his retirement several years ago.

**Ray A. Holshouser**, 61, superintendent of Plant 9 of the Cannon Mills Co., Kanawha, N. C., died January 8. Mr. Holshouser joined Cannon in 1918. He was general superintendent of carding and spinning for approximately 20 years. He was named superintendent of Plant 9 in 1954. Survivors include his widow and a daughter.

**John M. Hood**, senior chemist in the Erwin Mills Inc. research and development laboratory, Cooleemee (N. C.) Division, died suddenly December 23, 1960, in Wayne, Pa. Mr. Hood was a graduate of M.I.T. with a B. S. in chemistry. Prior to joining Erwin Mills, he was employed by Pacific Mills Corp. and by the American Cyanamid Co. He is survived by his widow and two daughters.

**James T. Hull**, 87, died December 26, 1960, at Kings Mountain, N. C. Mr. Hull was a former superintendent of Cherokee Falls Mills, and overseer at Crowder's Mountain Mills, Phoenix Mills and Bessemer City Mills. He is survived by three daughters.

**Harry B. Kilgore**, retired textile executive, died December 28, 1960, in his home at Woodruff, S. C. For many years he was manager of the Woodruff plant of Brandon Mills, now Abney Mills. He is survived by his wife.

**Lucius J. Knowles**, 56, a director and grandson of one of the founders of Crompton & Knowles Corp., died recently in New Canaan, Conn. A native of London, Mr. Knowles served briefly in the U. S. Consular Service before joining the family firm. He leaves his widow and his mother.

**Jesse Broadus Williams**, 84, former superintendent of the Aponaug Mfg. Co. in Kosciusko, Miss., died in Spartanburg, S. C., where he had gone to attend his wife's funeral. He retired from the mill several years ago. He is survived by a son.



# MILL NEWS

**NEW YORK, N. Y.**—Burlington Industries Inc. reports a net profit of \$35.4 million on sales of \$913 million for the fiscal year ended October 1, 1960, compared with earnings of \$27.6 million on sales of \$805.4 million in the previous year. Some 55% of the company's volume was in the man-made fiber field, with sales over the half-billion mark.

**SYLACAUGA, ALA.**—Avondale Mills has ordered 95 new Whitin spinning frames for its Catherine Plant here. The equipment consists of 67 Model F5 36" Superflex spinning frames, 288 spindles, four-inch gauge; and 28 Model F5 36-inch Superflex spinning frames, 288 spindles, four-inch gauge with reverse twist. The frames will be equipped with 45° roll stands, Super-Draft drafting system with Casablancas GX2 cradles, Whitin Unitrol top weighting and Bahnsen vacuum system of cleaning. The frames have been ordered to replace older equipment. Delivery is scheduled for early Spring.

**FALL RIVER, MASS.**—Berkshire Hathaway Inc. has announced that it is installing 10 new Japanese spinning frames on an evaluation basis. Sale of the frames was arranged by Edward S. Rudnick, U. S. representative of O-M Co. Ltd. of Tokyo.

**NEWBERRY, S. C.**—A new fiber testing laboratory has been installed adjacent to the buying offices at the Oakland Mill plant of The Kendall Co. here. The new laboratory is headed by Leon Pryor and is designed to make it possible to handle additional physical as well as chemical tests. The local laboratory does many of the tests that were formerly done at the main offices in Charlotte. Its functions will include a fiber testing service for cotton buyers, year-round testing of fibers for the mills and also work on research projects.

**FORT MILL, S. C.**—Springs Cotton Mills' profits for 1960 should be close to the \$13.7 million on sales of \$184.3 million in 1959, according to H. M. Close, president. The firm spent more than \$5 million in capital improvements last year. Despite the textile downturn, Close expressed confidence in 1961.

**EAST MONROE, N. C.**—Superior Yarn Mills here has shut down, laying off approximately 132 employees. The mill will be inundated by water from the new dam that is being built by the Duke Power Co. This completes the operations to close down this plant and its sister plant at Long Island, N. C., on the other side of the Catawba River in preparation for the new Lake Norman. The equipment has been moved to the Mount Holly plant of the Superior Yarn Mills.

**WARE SHOALS, S. C.**—Four new printing machines have been put into operation at the Riegel Textile Corp.'s plant here. Two of the machines were purchased and the other two were transferred from the Trion, Ga., mill. The expansion is designed to allow a reduction of shipments of fabrics between

divisions for printing, allowing each division to handle its own printing. The new units will raise to 12 the number of machines at this plant.

**KINGS MOUNTAIN, N. C.**—The new owners of Craftspun Yarns Inc. have started modernization of the plant for the manufacture of carded yarns and hope to have it completed by April 1. Purchase of the plant was completed shortly after Christmas, after a federal court had approved the sale several weeks earlier. The former owner was Scranton Lace Corp., Scranton, Pa.

**NEW YORK, N. Y.**—Reeves Bros. Inc. reports lower sales and sharply decreased profits in the second quarter ended December 31. Net profit for the period was \$209,660 on sales of \$15.9 million as compared with profit of \$769,712 on sales of \$18.8 million in the second quarter of the previous fiscal year. For the six months ended December 31, net profit was \$270,409 on sales of \$28.8 million as compared with earnings of \$1.3 million on sales of \$32.9 million in the first six months of the previous year.

**COLERIDGE, N. C.**—A new cotton yarn mill is being organized here by Dr. Henry Jordan of Jordan Spinning Co., Cedar Falls, and Sam Rankin of Ramseur (N. C.) Interlock Knitting Co. The new mill will take over the building now occupied by Brady Mfg. Co., handkerchief and shoelace firm. Brady will move to a new 15,000-square-foot building which is now under construction. Two separate parts of the old Brady building will be joined together with a two-story, 12,000-square-foot addition which will bring the plant's total manufacturing space to 46,000 square feet. The new yarn operation is expected to employ some 100 persons.

**CORNELIUS, N. C.**—The worsted spinning and weaving plant of Samuel Hird & Sons here will be closed when work on hand runs out. The plant is to be offered for sale. In the future the company will buy fabric from J. P. Stevens & Co., to replace the yardage formerly produced by the Cornelius mill. The mill went into operation in 1959 with 27 long draft spinning frames and 74 looms. It employs about 380 persons. The Caron Division of Reeves Bros., which leases 114,000 square feet of the 275-square-foot building, is continuing its operation.

**CHERAW, S. C.**—Burlington Industries has sold its fiber glass plant here and leased it back for 20 years. The building was sold to the relief and annuity board of the Southern Baptist Convention for approximately \$2.9 million. The transaction was a result of efforts of local business men who faced the choice of financing the project themselves or finding a buyer willing to buy and lease the plant. Two shifts are currently running at the mill and full production is not expected for approximately six months. Capacity employment should be between 900 and 1,000 persons.

**NEW YORK, N. Y.**—Purchase of 98 sliver-to-yarn spinning frames and three

high-speed drawing frames has been concluded by Joanna (S. C.) Cotton Mills, and shipment is expected in the first quarter. The transaction with O-M Co. Ltd., Tokyo, Japan, is said to involve over \$1 million, the largest textile machinery shipment to the U. S. under one contract.

**NINETY SIX, S. C.**—The new Sloan Plant of Greenwood Mills here is scheduled to go into operation in March. As many employees as possible will be moved from the present plant to the new one. There are to be approximately 1,200 bales of cotton in various stages of operations in the plant before it goes into full production.

**CHATTANOOGA, TENN.**—A new \$300,000 bleaching department has been completed at the National Plant of Standard-Coosa-Thatcher Co. here. The new two-story addition was erected adjacent to the present plant. The new bleaching equipment was especially designed for the company by Gaston County Dyeing Machine Co., Stanley, N. C. It consists primarily of two double-kier, 1,800-pound capacity package bleaching machines with automatic controls, and a new pressurized re-circulating Avesta dryer. The new installation has a capacity of over 85,000 pounds per week and is used primarily in bleaching industrial sewing threads.

**LIBERTY, S. C.**—The Liberty No. 2 Plant of Woodside Mills has completed a \$1.5 million expansion and modernization program, and all new equipment is now in operation. The expansion, which involved a fully air-conditioned 25,000-square-foot addition, provides a substantial increase in production of fine combed yarns for use at the company's Simpsonville, S. C., plant and at its Haynsworth Mill in Anderson, S. C.

**BELMONT, N. C.**—Fire struck the new frame warehouse of the Crescent Spinning Co. and did an estimated \$100,000 to \$150,000 worth of damage to stored bales of cotton. Some 450 bales were destroyed in the fire that was answered by seven fire companies. The company reported that the loss was only partially covered by insurance.

**NEW YORK, N. Y.**—For the third quarter, ending November 26, 1960, net profit for the Collins & Aikman Corp. was \$424,100 on sales of \$19.7 million against \$298,818 on sales of \$12.9 million in 1959, a profit increase of 42%. In the nine months ended November 26, net profit was 7% lower, totaling \$876,004 on sales of \$50.4 million against \$944,549 on sales of \$36.4 million in 1959.

**PELZER, S. C.**—The Kendall Co. will install 100 new looms and two high speed slashers in its Upper Plant here at a cost of \$270,000. The new looms will be 50" wide and will replace the 40" ones presently in use. Half of them will be installed in February and the other half in March. The new slashers will be put in place at the same time. The Upper Plant has 1,386 looms and six slashers. It manufactures diaper material, sheeting and other goods.



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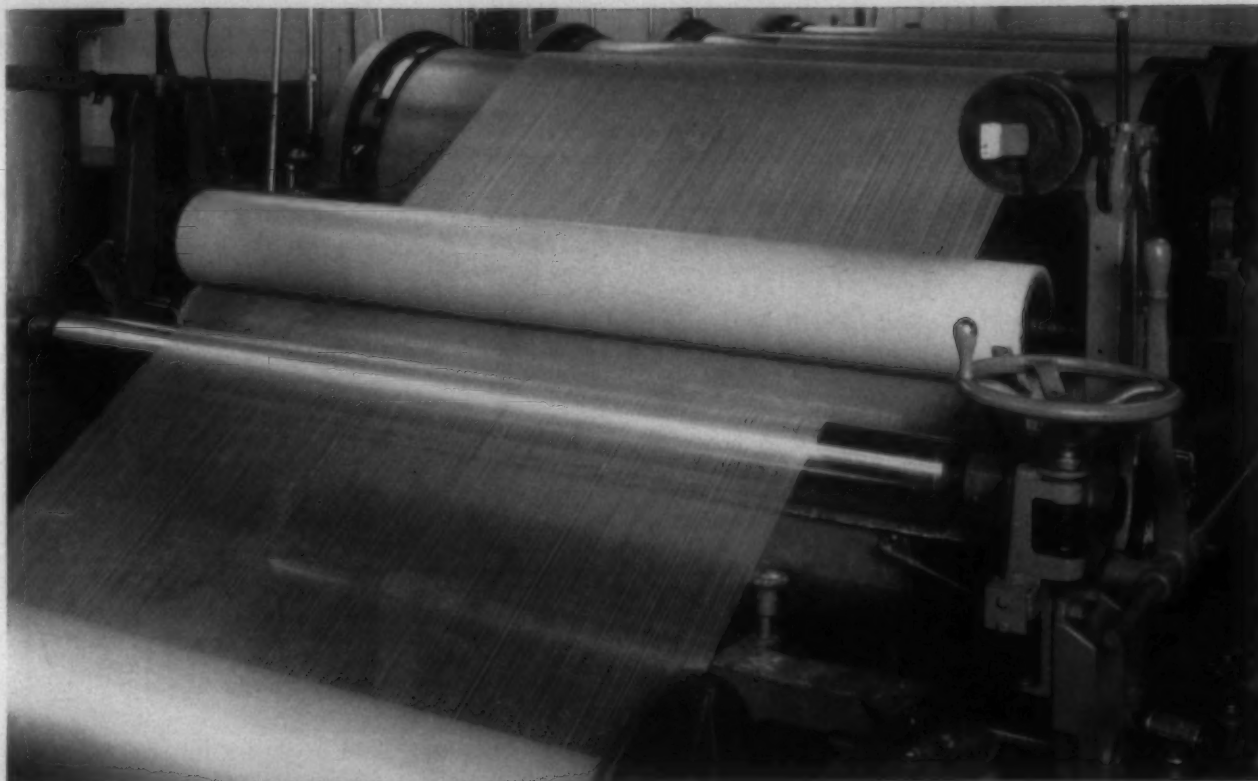


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## Textile Industry Schedule

For additional data (reservation requirements, membership requirements, program details, etc.) on activities listed here, contact name(s) shown in parentheses.

**Feb. 8 (W)**—Annual meeting, American Association For Textile Technology, Hotel Commodore, New York City. (General Chairman: Albert E. Johnson, National Institute of Drycleaning, 101 W. 31st St., New York, N. Y.)

**Mar. 16-17 (Th-F)**—Textile Engineering Conference, American Society Of Mechanical Engineers, Clemson College, Clemson, S. C. (Chairman: Prof. E. B. Grover, School of Textiles, N. C. State College, Raleigh, N. C.)

**Mar. 23-24 (Th-F)**—Spring meeting, Textile Quality Control Association, Hotel Charlotte, Charlotte, N. C. (Secretary: Werner Pels, National Cotton Council, 1200 18th St., N.W., Room 502, Ring Bldg., Washington 6, D. C.)

**Mar. 23-25 (Th-Sa)**—Annual meeting, American Cotton Manufacturers Institute, Fontainebleau Hotel, Miami Beach, Fla. (A.C.M.I., 1501 Johnston Bldg., Charlotte, N. C.)

**Apr. 6 (Th)**—Spring meeting, Piedmont Division, Southern Textile Association, Johnston Memorial Y.M.C.A., 3025 N. Davidson St., Charlotte, N. C. (Chairman: J. W. Inscoe, Carolina Mills Inc., Maiden, N. C.)

**Apr. 10-13 (M-Th)**—30th National Packaging Exposition, Lakefront Exposition Hall, Chicago, Ill. (American Management Assn., 1515 Broadway, New York 36, N. Y.)

**Apr. 12-14 (W-F)**—Annual meeting, Alabama Textile Manufacturers Association, Buena Vista Hotel, Biloxi, Miss. (Dwight M. Wilhelm, Exec. V-P, A.T.M.A., 125 S. McDonough St., Montgomery 4, Ala.)

**Apr. 14 (F)**—Spring meeting, South Carolina Division, Southern Textile Association, Clinton High School, Clinton, S. C. (Chairman: D. H. Roberts, Lydia Cotton Mills, Clinton, S. C.)

**Apr. 16-18 (Su-Tu)**—Spring meeting, Narrow Fabrics Institute, The Tides Inn, Irvington, Va. (Narrow Fabrics Institute, 11 W. 42nd St., New York 36, N. Y.)

**Apr. 18-19 (Tu-W)**—Spring meeting, Technical Advisory Committee and Board of Trustees,

Institute of Textile Technology, Charlottesville, Va.

**Apr. 22 (Sa)**—Spring meeting, Georgia Textile Operating Executives, Hightower Building, Georgia Tech, Atlanta. (James L. Taylor, Director, A. French Textile School, Georgia Tech, Atlanta)

**Apr. 26-29 (W-Sa)**—Annual meeting, Georgia Textile Manufacturers Association, Hollywood Beach, Hollywood, Fla. (T. M. Forbes, Exec. V-P, G.T.M.A., Citizens & Southern National Bank Bldg., Atlanta 3, Ga.)

**Apr. 27-28 (Th-F)**—Spring meeting, The Fiber Society, Georgia Center for Continuing Education, Athens, Ga. (Sec: Julian Jacobs, P. O. Box 405, Athens, Ga.)

**Apr. 29 (Sa)**—Spring meeting, Northern North Carolina-Virginia Division, Southern Textile Association, Cooleemee, N. C. (Chairman: Herman Cone Jr., Cone Mills Corp., Greensboro, N. C.)

**May 4-5 (Th-F)**—Thirteenth annual conference, Textile Industry Committee, American Institute of Electrical Engineers, Heart of Atlanta Motel, Atlanta, Ga. (Robert I. Uhl, Manager, Service Division, West Point Mfg. Co., Langdale, Ala.)

**May 6 (Sa)**—Spring meeting, Alabama Textile Operating Executives, Thach Auditorium, Auburn University, Auburn, Ala. (Cleveland L. Adams, Auburn University, Auburn, Ala.)

**May 10-12 (W-F)**—Thirty-first annual North Carolina Statewide Industrial Conference, Jack Tar Hotel, Durham, N. C. (H. S. Baucom, Director, N. C. Industrial Commission, Raleigh, N. C.)

**May 15-20 (M-Sa)**—National Cotton Week, sponsored by the National Cotton Council.

**June 22-24 (Th-Sa)**—53rd annual meeting, Southern Textile Association, Ocean Forest Hotel, Myrtle Beach, S. C. (S.T.A., P. O. Box 1225, Charlotte 1, N. C.)

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday



# textile bulletin

Editor . . . . . JACK KESSIAH  
Associate Editor . . . . . JOHN V. LAWING  
Assistant Editor . . . . . VICTOR EUGENE LOCKEY  
Inquiry & Reader Service . . . . . JACQUELINE BOYLES

TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, \$1.50; two years payable in advance, \$2.00;

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## Hold Tight

THERE is real encouragement in the textile industry's continuing determination to hold a tight rein on its production during fourth quarter 1960. If the line can be held, chances are good that business can bound back from the current slump with far more speed than it did in 1958.

Forecasts for both the general and the textile economy seem pretty well agreed that the pace for the next four or five months is going to be as slow or slower than the past six months. But by mid-year, possibly earlier, the pace should quicken, with an accelerating upturn continuing the balance of the year.

Unlike many previous textile cycles, this one seems generally to have paralleled the overall economy. There have been no drastic cuts either in production or prices. By the same token, it is hoped that the cycle will smooth out as early as the general economy is expected to. If it does, it can be marked down as a real achievement for the industry.

\* \* \* \*

Commenting on the 1961 outlook for the various segments of the industry, the Business and Defense Services Administration of the Commerce Department comes up with the following.

**Cotton Broad Woven Goods**—Mill stocks at the beginning of the year are high but not unduly burdensome, and the curtailment in production underway at the end of 1960 should prevent their becoming excessive. The decline in cotton fabric sales during a period when retail sales of clothing were at relatively high levels would indicate that some liquidation of inventories in distributive channels is in process. Mill operations in early 1961 are expected to continue at about the same level as in the final months of 1960. By mid-year, possibly during the second quarter, mill activity is expected to begin an upward trend in line with the anticipated improvement in the general economy.

**Man-Made Fiber Broad Woven Goods**—Activity in this segment of the industry reached a peak for recent periods in the first quarter of 1960, then fell off in each succeeding quarter. Prices, which were somewhat weak at the beginning

TEXTILE BULLETIN IS PUBLISHED MONTHLY BY

## CLARK PUBLISHING COMPANY

— Offices and Plant: 218 West Morehead Street, Charlotte 6 —  
P. O. Box 1225 • CHARLOTTE 1, N. C. • Tel. EDison 3-3173

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one year, Canada, \$3.00; one year, other countries in Postal Union, \$5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

of the year, improved considerably through the first half but softened in later months. Prompt adjustment of output to demand levels is expected to forestall the accumulation of excessive inventories and permit the industry to participate fully in a revival of business. Improvements are expected by the middle of the year, the timing to depend largely on developments in the general economy.

**Woolen and Worsted Goods**—The marked improvement in the woolen and worsted industry in 1959 continued into the early months of 1960, after which some momentum was lost, but activity continued generally above 1958. There is little expectation that the long-term problems of the industry—especially the import problem—will be overcome in 1961. But moderate increases in output of apparel fabrics and consumption of apparel class wool should take place. Woolen and worsted fabric production will probably continue in the pattern of late 1960 into the first half of 1961, after which output should enter upon an upward trend.

**Textile Machinery Industry**—Capital expenditures for textile machinery in 1960 are estimated to have approached \$500 million, the highest figure since 1951. But whether or not this high rate of operations can be continued throughout 1961 depends on what happens to the mills. Orders for maintenance and operating supplies could conceivably dip as much as 10-20% even though the current backlog of orders is reportedly sufficient to keep most machinery manufacturers operating at current levels until well into the second quarter. By the same token, maintenance and operating supplies—which constitute 50% of the machinery produced—are in demand during periods of recession because many mills modernize their equipment to obtain lower unit cost. Funds for financing capital expenditures at attractive interest rates are expected to be available through normal channels.

\* \* \* \*

If you take stock in these calculated hunches, then you should remember to temper them with the uncertainty of the import situation. Have imports reached a peak? Or are they gaining momentum? Pessimists see no likelihood of a drop in the current volume unless and until specific quotas can be applied. Optimists have fixed hopeful eyes on the Kennedy Administration.

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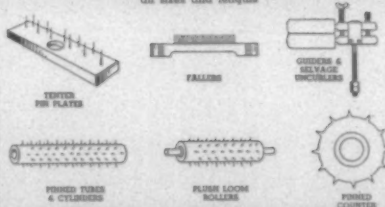
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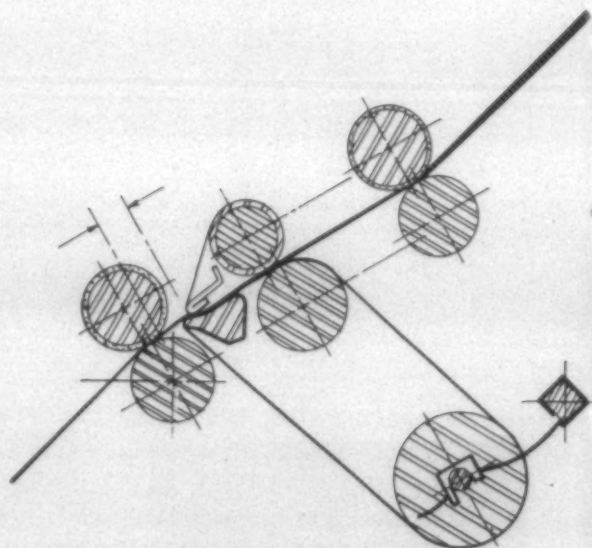
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| 1               | 2               | 3                       | 4                           | 5                     | 6             | 7               |
|-----------------|-----------------|-------------------------|-----------------------------|-----------------------|---------------|-----------------|
| Color of Stripe | Width of Stripe | Dents per inch in Cloth | Calculated Dents per Stripe | Used Dents per Stripe | Ends per Dent | Ends per Stripe |
| White           | .07"            | 54                      | 3.78                        | 4                     | 2             | 8               |
| Blue            | .10"            | 54                      | 5.40                        | 6                     | 2             | 12              |
| White           | .07"            | 54                      | 3.78                        | 4                     | 2             | 8               |
| Grey            | .80"            | 54                      | 43.20                       | 43                    | 2             | 86              |
| White           | .19"            | 54                      | 10.26                       | 10                    | 2             | 20              |
| Red             | .78"            | 54                      | 42.12                       | 42                    | 2             | 84              |
| White           | .19"            | 54                      | 10.26                       | 10                    | 2             | 20              |
| Grey            | .80"            | 54                      | 43.20                       | 43                    | 2             | 86              |
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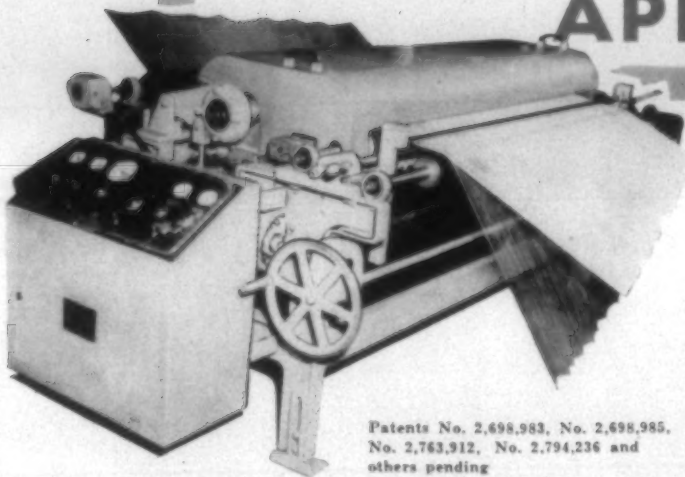
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